HITACHI

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SERVICE MANUAL

NTSC
ATSC

DW2-U
Chassis

PA

No. 0218

55HDX99/DW2-U
55HDT79/DW2-U
55HDS69/DW2-U

R/C: CLU-4352UG2 55HDS69
R/C: CLU-3861WL 55HDT79/55HDX99

SERVICE MANUAL REVISION HISTORY INFORMATION

DATE	REVISON #	REASON
May , 06	SM00001	FIRST ISSUE OF MANUAL
07.20.06	CH 1	Improved Block Diagram
09.27.06	CH 2	Part Numbers Changed
02.06.07	CH 3	Change 2 updated part description information
07.06.07	CH 4	Added part number for interconnect cable

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

PLASMA DISPLAY PANEL

MAY 2006

HHEA MANUFACTURING DIVISION

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TO GO TO A CHAPTER, CLICK ON ITS HEADING BELOW

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CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Before servicing this chassis, it is important that the service technician read the “IMPORTANT SAFETY INSTRUCTIONS” in this service manual.

SAFETY NOTICE
USE ISOLATION TRANSFORMER WHEN SERVICING

Components having special safety characteristics are identified by a ⚠ on the schematics and on the parts list in this Service Data and its supplements and bulletins. Before servicing the chassis, it is important that the service technician read and follow the “Important Safety Instructions” in this Service Manual.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

PLASMA DISPLAY PANEL

MAY 2006 **HHEA MANUFACTURING DIVISION**

SAFETY PRECAUTIONS

NOTICE: Comply with all cautions and safety-related notes located on or inside the cover case and on the chassis or plasma module.

WARNING: Since the chassis of this receiver is connected to one side of the AC power supply during operation, whenever the receiver is plugged in service should not be attempted by anyone unfamiliar with the precautions necessary when working on this type of receiver.

1. When service is required, an isolation transformer should be inserted between power line and the receiver before any service is performed on a “HOT” chassis receiver.

2. When replacing a chassis in the receiver, all the protective devices must be put back in place, such as barriers, non-metallic knobs, insulating cover-shields, and isolation resistors, capacitors, etc.

3. When service is required, observe the original lead dress.

4. Always use manufacturer’s replacement components. Critical components as indicated on the circuit diagram should not be replaced by another manufacturer’s. Furthermore, where a short circuit has occurred, replace those components that indicate evidence of over heating.

5. Before returning a serviced receiver to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the receiver by the manufacturer has become defective, or inadvertently defeated during servicing.

Therefore, the following checks should be performed for the continued protection of the customer and service technician.

Leakage Current Cold Check

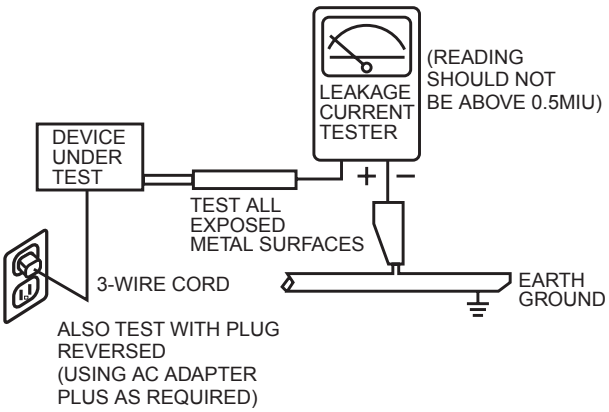
With the AC plug removed from the 120V AC 60Hz source, place a jumper across Line 1 and Line 2 of the three plug prongs, do not connect with the third prong, which is physical ground.

Using an insulation tester (DC500V), connect one of its leads to the AC plug jumper and touch with the other lead each exposed metal part (antennas, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis should have a resistor reading over 4MΩ. Any resistance value below this range indicates an abnormality which requires corrective action. An exposed metal part not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with the American National Standards Institute (ANSI) C101.0 Leakage Current for Appliances. In the case of the PDP monitor set the AC switch first in the ON position and then in the OFF position, measure from across Line 1 and Line 2 of the three plug prongs, do not connect with the third prong, which is physical ground, to all exposed metal parts of the instrument (antennas, handle bracket, metal cabinet, screw heads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 MIU. Reverse the instrument power cord plug in the outlet and repeat test.

AC LEAKAGE TEST



ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE RECEIVER TO THE CUSTOMER.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in HITACHI television receivers have special safety-related characteristics. These are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified with a ⚠ mark in the schematics and parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the HITACHI-recommended replacement component, shown in the parts list in this Service Manual, may create shock, fire, X-radiation, or other hazards.

Product safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current HITACHI Service Manual. A subscription to, or additional copies of HITACHI Service Manuals may be obtained at a nominal charge from HITACHI Sales Corporation.

1. Follow the general caution recommendations from “Safety precautions” section.

42HDS69/HDT79/HDX99 - Plasma Monitor Unit
55HDS69/HDT79/HDX99 - Plasma Monitor Unit

1. Follow the general caution recommendations from “Safety precautions” section.
2. Since the Panel module and front filter are made of glass, sufficient care shall be taken when handling the broken module and filter in order to avoid injury.
3. If necessary to replace Panel module, this work must be started after the panel module and the AC/DC Power supply becomes sufficiently cool.
4. Special care must be taken with the display area to avoid damaging its surface.
5. The Panel Module shall not be touched with bare hands to protect its surface from stains.
6. It is recommended to use clean soft gloves during the replacing work of the Panel module in order to protect, not only the display area of the panel module but also the serviceman.
7. The Chip Tube of the panel module (located upper left of the back of the panel module) and flexible cables connecting Panel glasses to the drive circuitry Printed Wiring Boards (P.W.B.) are very weak, so sufficient care must be taken to prevent breaking or cutting any of these. If the Chip Tube breaks the panel module will never work, replacement for a new plasma panel module will be needed.
8. AV Digital Block, power supply and PDP driving circuit P.W.B.’s are assembled on the rear side of the PDP module, take special care with this fragile circuitry; particularly, Flexible Printed Circuits bonded to surrounding edges of the glass panel. They are not strong enough to withstand harsh outer mechanical forces. Avoid touching the flexible printed circuits by not only your hands, but also tools, chassis, or any other object. Extreme bending of the connectors must be avoided too. In case the flexible printed circuits are damaged, the corresponding addressed portions of the screen will not be lit and exchange of a glass panel will be required.

PDP Module Handling

When there is need to replace a broken PDP module which is the displaying device from the Plasma monitor unit, consider the following:

1. When carrying the PDP module, two persons should stand at both shorter-edge sides of the glass-panel and transport it with their palms. Avoid touching the Flexible Printed Circuits or the chip tube on the corner of the glass-panel. Handle only by the surface of the glass panel. In case of some PDP modules, electrode repair is done by connecting between regular terminal with Cu tape and Cu wire. Please do not hook and/or damage this repair line. If it is damaged, the module will not function unless the glass-panel is exchanged with a new glass-panel.
2. When carrying PDP module, watch surrounding objects, such as tables, and also do not carry it alone since it may be dangerous and it will be damaged due to excessive stress to the module (glass-panel).
3. Please do not stand the module with the edge of the glass-panel on the table since this might result in damage to the glass-panel and/or flexible printed circuits due to excessive stress to the module (glass-panel).

WARNING
Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health and Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with solder. Also, when soldering make sure you are in a well ventilated area in order to avoid inhalation of any smoke or fumes released.

SAFETY NOTICE
USE ISOLATION TRANSFORMER
WHEN SERVICING

POWER SOURCE

This plasma television is designed to operate on 120 Volts 60Hz, AC house current. Insert the power cord into a 120 Volts 60Hz outlet.

NEVER CONNECT THE PLASMA TELEVISION TO OTHER THAN THE SPECIFIED VOLTAGE OR TO DIRECT CURRENT AND TO 50HZ. TO PREVENT ELECTRIC SHOCK, DO NOT USE THE PLASMA TELEVISION’S (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE, OR THE OUTLETS UNLESS THE BLADES AND GROUND TERMINAL CAN BE FULLY UNSERTED TO PREVENT BLADE EXPOSURE.

SERVICING PRECAUTIONS

CAUTION: Before servicing instruments covered by this service data and its supplements and addenda, read and follow the "Important Safety Instructions" on page 3 of this publication.

NOTE: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

General Servicing Guidelines

1. Always unplug the instrument AC power cord from the AC power source before:
   a. Removing or reinstalling any component, circuit board, module, or any other instrument assembly.

   b. Disconnecting or reconnecting any instrument electrical plug or other electrical connection.

   c. Connecting a test substitute in parallel with an electrolytic capacitor in the instrument.

   CAUTION: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Do not spray chemicals on or near this instrument or any of its assemblies.

3. Unless specified otherwise in these service data, clean electrical contacts by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable nonabrasive applicator: 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength).
   CAUTION: This is a flammable mixture. Unless specified otherwise in these service data, lubrication of contacts is not required.

4. Do not defeat any plug/socket of voltage interlocks with which instruments covered by this service data might be equipped.

5. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat-sinks are correctly installed.

6. Always connect the test instrument ground lead to the appropriate instrument chassis ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

7. Use with this instrument only the test fixtures specified in this service data.
   CAUTION: Do not connect the test fixture ground strap to any heatsink in this instrument.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a grounded-tip soldering iron to solder or desolder ES devices.

4. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES device.

5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range 500°F to 600°F.

2. Use an appropriate lead free solder (see page 8). Lead solder can be used, but there is a possibility of failure due to insufficient strength of the solder.

3. Keep the soldering iron tip clean and well-tinned.

4. Thoroughly clean the surfaces to be soldered. Use a small wire-bristle (0.5 inch or 1.25 cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.

5. Use the following desoldering technique.
   a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).

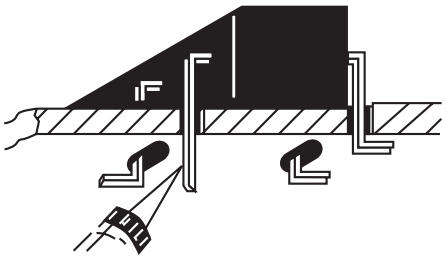
   b. Heat the component lead until the solder melts. Quickly draw away the melted solder with an anti-static, suction-type solder removal device or with solder braid.
      CAUTION: Work quickly to avoid overheating the circuit board printed foil.

6. Use the following soldering technique.
   a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).

   b. First, hold the soldering iron tip and solder strand against the component lead until the solder melts.

   c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.
      CAUTION: Work quickly to avoid overheating the circuit board printed foil or components.

   d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.



Use Soldering Iron to Pry Leads

IC Removal/Replacement

Some Hitachi unitized chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.

2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.

2. Carefully bend each IC lead against the circuit foil pad and solder it.

3. Clean the soldered areas with a small wire-bristle brush. (It is not necessary to reapply acrylic coating to areas.)

"Small-signal" Discrete Transistor Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.

2. Bend into a "U" shape the end of each of the three leads remaining on the circuit board.

3. Bend into a "U" shape the replacement transistor leads.

4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact, then solder each connection.

Power Output Transistor Devices Removal/Replacements

1. Heat and remove all solder from around the transistor leads.

2. Remove the heatsink mounting screw (if so equipped).

3. Carefully remove the transistor from the circuit board.

4. Insert new transistor in circuit board.

5. Solder each transistor lead, and clip off excess lead.

6. Replace heatsink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to diode body.

2. Bend the two remaining leads perpendicularly to the circuit board.

3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.

4. Securely crimp each connection and solder it.

5. Inspect (on the circuit board copper side) the solder joints of the two "original leads". If they are not shiny, reheat them and, if necessary, apply additional solder.

Fuses and Conventional Resistor Removal/Replacement

1. Clip each fuse or resistor lead at top of circuit board hollow stake.

2. Securely crimp leads of replacement component around stake 1/8 inch from top.

3. Solder the connections.
   CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board, to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board, causing the foil to separate from, or "lift-off," the board. The following guidelines and procedures should be followed whenever this condition is encountered.

In Critical Copper Pattern Areas

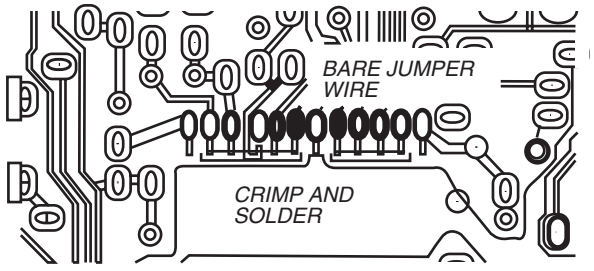
High component/copper pattern density and/or special voltage/current characteristics make the spacing and integrity of copper pattern in some circuit board areas more critical than in others. The circuit foil in these areas is designated as Critical Copper Pattern. Because Critical Copper Pattern requires special soldering techniques to ensure the maintenance of reliability and safety standards, contact your Hitachi personnel.

At IC Connections

To repair defective copper pattern at IC connections, use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections.)

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary.)

2. Carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.



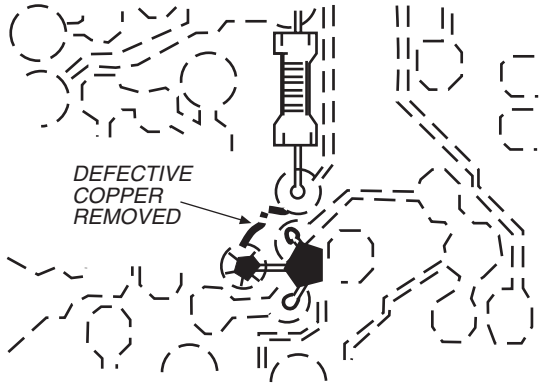
Install Jumper Wire and Solder

3. Bend a small "U" in one end of a small-gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.

4. Route the jumper wire along the path of the cut-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area, and clip off any excess jumper wire.

At Other Connections

Use the following technique to repair defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.



Insulated Jumper Wire

1. Remove the defective copper pattern with a sharp knife. Remove at least 1/4 inch of copper, to ensure hazardous condition will not exist if the jumper wire opens.

2. Trace along the copper pattern from both wire sides of the pattern break and locate the nearest component directly connected to the affected copper pattern.

3. Connect insulated 20-gauge jumper wire from the nearest component on one side of the pattern break to the lead of the nearest component on the other side. Carefully crimp and solder the connections.
   CAUTION: Be sure the insulated jumper wire is dressed so that it does not touch components or sharp edges.

NOTE: ***These components are affixed with glue. Be careful not to break or damage any foil under the component or at the pins of the ICs when removing. Usually applying heat to the component for a short time while twisting with tweezers will break the component loose.***

Leadless Chip Components (surface mount)

Chip components must be replaced with identical chips due to critical foil track spacing. There are no holes in the board to mount standard transistors or diodes. Some chip capacitor or resistor board solder pads may have holes through the board, however the hole diameter limits standard resistor replacement to 1/8 watt. Standard capacitors may also be limited for the same reason. It is recommended that identical chip components be used. .

Chip resistors have a three digit numerical resistance code -1st and 2nd significant digits and a multiplier. Example: 162 = 1600 or 1.6KΩ resistor, 0 = 0Ω (jumper).

Chip capacitors generally do not have the value indicated on the capacitor. The color of the component indicates the general range of the capacitance.

Chip transistors are identified by a two letter code. The first letter indicates the type and the second letter, the grade of transistor.

Chip diodes have a two letter identification code as per the code chart and are a dual diode pack with either

common anode or common cathode. Check the parts list for correct diode number.

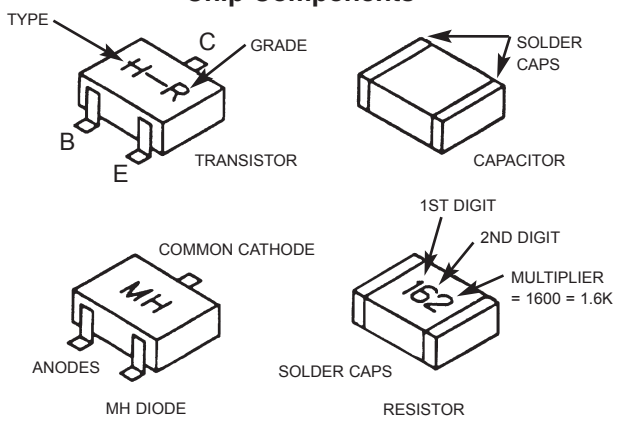
Component Removal

1. Use solder wick to remove solder from component end caps or terminals.
2. Without pulling up, carefully twist the component with tweezers to break the adhesive.
3. Do not reuse removed leadless or chip components since they are subject to stress fracture during removal .

Chip Component Installation

1. Put a small amount of solder on the board soldering pads.
2. Hold the chip component against the soldering pads with tweezers or with a miniature alligator clip and apply heat to the pad area with a 30 watt iron until solder flows. Do not apply heat for more than 3 seconds

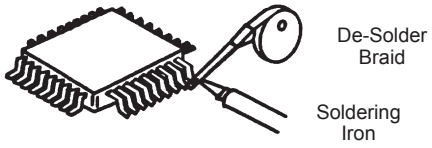
Chip Components



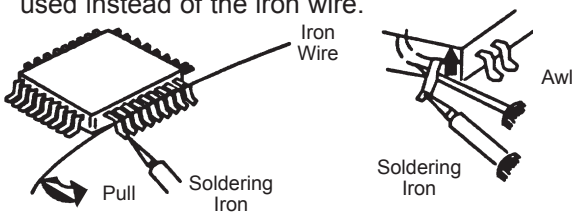
How to Replace Flat-IC —Required Tools—

- Soldering iron
- iron wire or small awl
- De-solder braids
- Magnifier

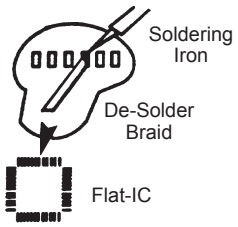
1. Remove the solder from all of the pins of a Flat-IC by using a de-solder braid.



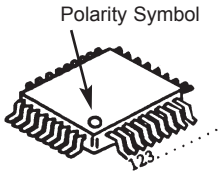
2. Put the iron wire under the pins of the Flat-IC and pull it in the direction indicated while heating the pins using a soldering iron. A small awl can be used instead of the iron wire.



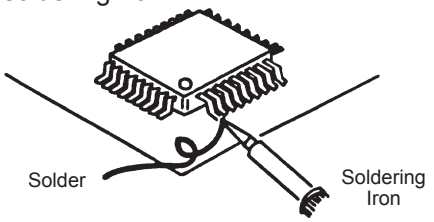
3. Remove the solder from all of the pads of the Fiat-IC by using a de-solder braid.



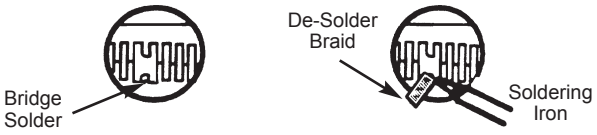
4. Position the new Flat-IC in place (apply the pins of the Flat-IC to the soldering pads where the pins need to be soldered). Properly determine the positions of the soldering pads and pins by correctly aligning the polarity symbol.



5. Solder all pins to the soldering pads using a fine tipped soldering iron.



6. Check with a magnifier for solder bridge between the pins or for dry joint between pins and soldering pads. To remove a solder bridge, use a de-solder braid as shown in the figure below.



Information for service about lead-free solder introduction

Hitachi introduced lead-free solder to conserve the "Earth Environment".
Please refer to the following before servicing.

(1) Characteristic of lead-free solder

Melting point of lead free solder is 40-50°C higher than solder containing lead.

(2) Solder for service

Following composition is recommended.

" Sn - 3.0Ag - 0.5Cu " , or " Sn - 0.7 Cu "

Lead solder can be used, but there is a possibility of failure due to insufficient strength of the solder.

Caution when using solder containing lead.

Please remove previous solder as much as possible from the soldering point.

When soldering, please perfectly melt the lead-free solder to mix well with the previous solder.

(3) Soldering iron for lead-free solder.

Melting point of lead-free solder is higher than solder containing lead.
Use of a soldering tool "with temperature control" and "with much thermal capacitance" is recommended.
(Recommended temperature control : 320°C - 450°C)

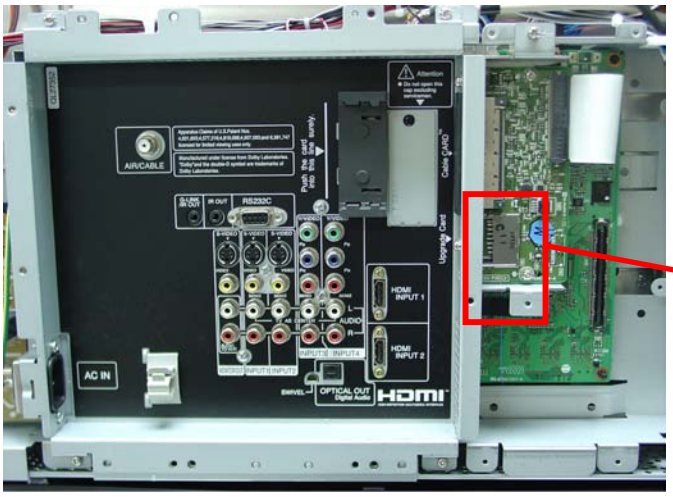
Recommended temperature

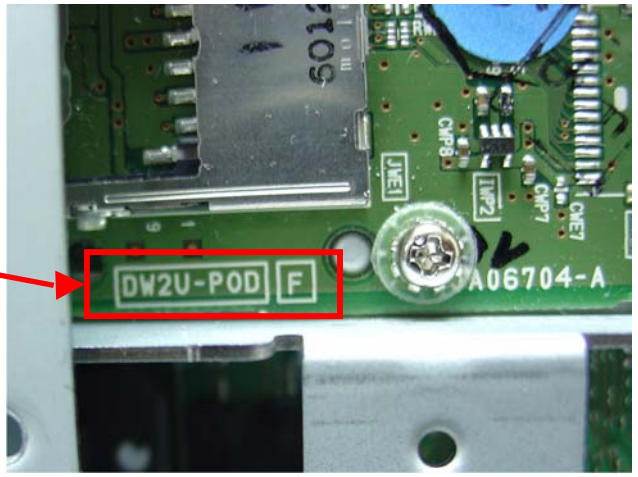
PWB with chip parts	320°C +/- 30°C
PWB without chip parts	380°C +/- 30°C
Chassis, metal, shield etc.	420°C +/- 30°C

(4) Identification of lead-free PWB

2004 models	>> lead-free solder is introduced
2006 models	>> lead-free solder apply

On lead-free PWB, "F" is added at the beginning of stamp on PWB. (e.g. DW2-POD F)





AGENCY REGULATORY INFORMATION

Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

FCC Information

This device complies with part15 of the FCC Rules.Operation is subject to the following two conditions : (1) This decide may not cause harmful interference and (2) This decide must accept any interference received, including interference that may cause undesired operation.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Hitachi America ,Ltd. Home Electronics Division may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Any cables that are supplied with the system must be replaced with identical cables in order to assure compliance with FCC rules. Order Hitachi spares as replacement cables.

Note

This Plasma Television receiver will display television closed captioning, (CC or), in accordance with paragraph 15.119 of the FCC rules.

INDUSTRY CANADA AGENCY REGULATORY INFORMATION

Cable Compatible Television Apparatus- Tèlèvision câblocompatible, Canada.

TV GUIDE

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Gemstar-TV Guide International Inc. and/or its related affiliates are not in any way liable for the accuracy or availability of the program schedule information or other data in the TV Guide On Screen system and cannot guarantee service availability in your area. In no event shall Gemstar-TV Guide International, Inc. and/or its related affiliates be liable for any damages in connection with the accuracy or availability of the program schedule information or other data in the TV Guide On Screen system.

ACKNOWLEDGMENTS AND TRADEMARKS

This Plasma Television complies with VESA DDC2B specifications, Plug & Play is a system with computer, peripherals (including monitors) and operating system. It works when the monitor is connected to a DDC ready computer that is running an operating system software that is capable for the plug & play.

When a Plug and Play PC is powered on, it sends a command to the Monitor requesting identification. The Monitor sends back a string of data including its characteristics.

TRADEMARK ACKNOWLEDGMENT

DDC™ is a trademark of Video Electronics Standard Association.
IBM PC/AT and VGA are registered trademarkds of International Business Machines Corporation of the U.S.A.
Apple and Macintosh are registered trademarks of Apple Computer, Inc.
VESA is a trademark of a nonprofit organization, Video Electronics Standard Association.

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Cable Compatible Television Apparatus- Tèlèvision câblocompatible, Canada.

Notes on Closed Caption:
This Plasma Television receiver will display television closed captioning, (CC or), in accordance with paragraph 15.119 of the FCC rules.

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INTRODUCTION

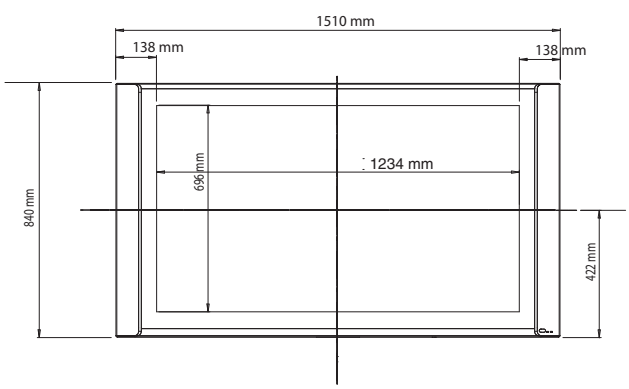
The Digital AV Block is inside of the Panel assembly controls most of the user functions of the complete TV set and conditions the signal to the plasma panel.

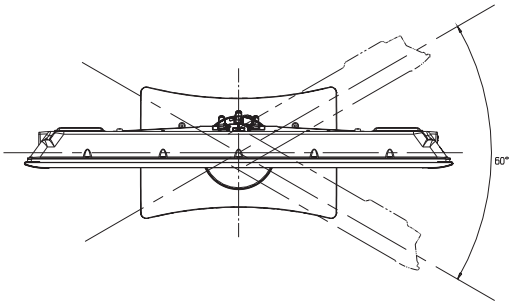
The 42" and 55" TV's contain the displaying device, which is the plasma display panel module, and the driving circuitry, which receives the signal from the Digital AV Block and after processing, delivers the image to the display module.

This HITACHI Service Manual is intended for the qualified service personnel and it contains the necessary information for troubleshooting the Plasma television set in case of malfunction.

DIMENSIONS:

55HDS69/HDT79/HDX99





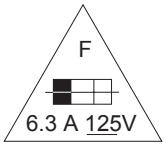
POWER RATINGS:

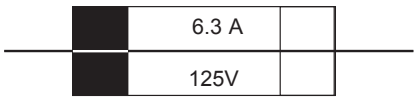
No.	Model Name	Indicated Value			PST(W)		Chassis
		Max Rating		Average Rating (W)	Without POD. less than 1W	With POD. less than 14W	
		(W)	(A)				
1	55HDS69/HDT79 55HDX99	490W	4.5A	323W	0.6W	14W	DW-2U

CIRCUIT PROTECTION

CAUTION: Below is an EXAMPLE only. See Replacement Parts List for details. The following symbol near the fuse indicates fast operation fuse (to be replaced). Fuse ratings appear within the symbol.

Example:





"RISK OF FIRE - REPLACE FUSE AS MARKED"

The rating of fuse F9A2 is 6.3 A - 125V.
Replace with the same type fuse for continued protection against fire.

SPECIFICATIONS

FEATURES

A- Plasma

Model				55HDS69/55HDT79/55HDX99	
Dimension	Size		1	1510mm x 840mm x 119mm	
	Weight		2	59k g	
A/C Input Voltage	Input AC Voltage		3	AC108V~132V (with 3 Plug AC Power Cord inlet type ,1.8m length)	
	Input AC Frequency		4	60Hz	
	Power Consumption		5	370W, SBY/POD -SBY less than 1W/14W	
Front End	Front End(NTSC & ATSC)		6	ENGD6305 NTSC/ATSC(8VSB).64QAM.256QAM)	
	Available Channel		7	2~13	VHP
			8	14 ~ 69	UHF
			9	A-5~A-1,A~W,W+1~W+94	CATV
Input Signal	Video Signal		10	N T S C	
	Component Signal		11	480 i /p. 1080 i , 720p	
	PC Signal		12	V G A - U X G A fH:24KHz-1 09KHz,fV:50Hz-85Hz)	
	HDMI Signal		13	480i,480p,720p,1080i(EIA-861B)	3
Picture	Y/C Separation		14	3D Y/C (ON fix)	
	Line Correction		15	No	
	I-P Conversion		16	Motion Adaptive & Multi Angle Interpolation	FC6
	Picture Mode		17	Day.Night	
	Display Mode		18	42:1024i,55:768p	Video Signal
			19	42:1024i,55:768p	ComponentSignal
			20	42:1024i,55:768p	PinP Mode
			21		-
Sound Enhancement			22	BassBoost & Surround (Normal, Wide, Off)	
Adjustment	Settings for Video Signal		23	Picture,Contrast,Brightness,Color,Tint , Sharpness, W/B Temp.Black Enhancement .Contrast Mode.Color Management/Decoding ,Auto Color.Noise Reductfon.Auto Movie Mode, .Black Side Panel	
	Settings for Sound		24	Vol, Balance, Bass.Treble, Source, Internal Speakers ,Auto Noise Cancel.Perfect Volume.Mute.Soft Mute	
			25		
			26		
General Function	PinP Mode	Split	27	With(ANT/CABLE DIGITAL CHANNEL & Video.480i ,720p,1080i)	Except Photo Input only HDT/HDX
		Strobe	28	With(3Pix:only ANT/CABLE DIGITAL CHANNEL,Video,480i)	Except Photo Input only HDT/HDX
			29		
		POP	30	With Main: ANT/CABLE DIGITAL CHANNEL,Video.480i ,720p,1080i)	Except Photo Input only HDT/HDX
		PIP	31	With(Main:ANT/CABLE DIGITAL CHANNEL,Video.480i ,720p,1080i)	Except Photo Input only HDT/HDX
		Freeze	32	With(3Pix:only ANT/CABLE DIGITAL CHANNEL,Video,480i)	Except Photo Input only HDT/HDX
	Wide Mode		33	7Mode	
	Aspect Video Selection		34	4:3 Standard/16:9 Standard1 /16:9 Standard 2 4:3 Expanded/Zoom1/Zoom 2/16:9 Zoom	
	PC		35	Full/Normal/Real (Real 42:VGA,55:VGA/SVGA/XGA/WXGA)	
	Film Theater		36	With(Auto Movie Mode:On/Off)	
	Color Temperature		37	4Mode (High/Medium/Standard/Black & White)	Black & White only HDT/HDX
	Input Signal Selection		38	VIDEO1/2/3/4/5, Cable/ Air,IEEE1394,Photo Input	IEEE1394 only HDT/HDX Photo Input only HDT/HDX

TABLE OF CONTENTS

SPECIFICATIONS

FEATURES

Model			55HDS69/55HDT79/55HDX99	
General Function	Gamma Correction	39	Only for Service Menu	
	Picture Enhancer	40	-	
	Input Signal Identification	41	yes	
	Audio Special Mode	42	No	
	Power Save Mode	43	With (On/Off) (Video In)	LED Normal: Blue
		44		Power Save: Orange Stand by: Red
	Burning Protection	45	With (Raster Shift:3 option.All White Pattern)	
	OSD Language (VIDEO)	46	ENGLISH.FRANCAIS.ESPANOL	
	Power Swivel	47	With 55HDT79 and 55HDX99 only	Stand sold separately
R/C Handset		48	CLU-3861WL/CLU-123S /CLU-4352UG2	PANASONIC/UEI/HOSHIDEN
In/Out Terminal		49		
	Composite Video Input (VIDEO1~5)	50	5 Input: RCA pin* 5 (1 Input Side Panel)	
	S-In(S2 Terminal) (Video/S are common selector, priority is S-In) .	51	2 InputMini Din-4P x 2	
	Component Signal Input (VIDEO3.VIDEO4.VIDEO5)	52	3 Input:RCA pin x 9(Y of VIDEO1/2/5 is common input for Composite-In)	
	Digital Input(HDMI-HDCP)	53	3 Input:HDMI(18P)X3 (Selected by component Video1/2/5.Digital input priority)	
	Audio In (L/R) (Lch:mono)	54	5 Input:RCApinx10	
	Auto Link	55	1 Input (VIDEO2 LINK)	Auto Link Function
	Video Control Terminal (BS)	56	No	
	U/V Ant Input	57	CABLE / AIR	
	BS-I/F Input	58	No	
	Video Monitor Out Terminal	59	1 Output: RCA pin x 1	
	Audio Output Terminal	60	1 Output UR:RCA pin x 2(Common input for No.59)	
	Audio Monitor Out Terminal	61	1 Output L/R:RCA pin x 2	
	IR-OUTPUT	62	2 Terminal	55HDT79/55HDX99 Only
	Headphone Terminal	63	No	
		64		
	IEEE 1394 Input	65	2 (4pin connector)	55HDX99 Only
	RS-232C Terminal	66	1 (Female type)	
	Photo Input	67	1 (On Side panel)	55HDT79/55HDX99 Only
	Audio Optical Output	68	1 (Square type)	
Front Key	Main Power Switch	69	Yes , below panel	
	Power On/off Switch	70	Yes, on side panel	
	IR Receiving Unit	71	Yes, on front panel	
	Power Indicator LED	72	Yes, on front panel	
	Menu Control Key	73	Yes, on side panel (Channel U/D, Vol U/D, A/V Input Select , Menu Select)	
Option	POP TV Stand	74	With	
	Wall Mount Unit	75	With	
		76	-	

FEATURES & DIFFERENCES

Model Name	Class	Chassis	Series Name	Cabinet Design	Aspect	ATSC	ATSC/NTSC 1Tuner	QAM Basic Digital Cable	POD	MPEG Decoder	EPG Gemstar	M/C
55HDX99	HDX	DW2C	Directors	Leggero(ALL BLK)	16x9	X	X	X	X	X	X	USB
55HDT79	HDT	DW2B	UltraVision	Leggero(SP:BLK, DECO:SIL)	16x9	X	X	X	X	X	X	USB
55HDS69	HDS	DW2A	UltraVision	Leggero(ALL SIL)	16x9	X	X	X	X	X	-	-

Model Name	Class	DTV NTSC FORMAT	Seine	3/2 Pulldown	Fill Mode	Memory by inputs	Shield	Comb Filter	Resolution	OSD	Color Temp
55HDX99	HDX	1080i	Seine2	Auto/off	7modes	X	31% Mesh	3DYC	P2 : 1366x768	06 OSD Dir	4Mode(High, Med,Std, B&W
55HDT79	HDT	1080i	Seine2	Auto/off	7modes	X	36% Mesh	3DYC	P2 : 1366x768	06 OSD A	3Mode(High, Med,Std)
55HDS69	HDS	1080i	Seine2	Auto/off	7modes	X	36% Mesh	3DYC	P2 : 1366x768	06 OSD B	3Mode(High, Med,Std)

Model Name	Class	PIP	AV NET	Remote			IR Pass Thru	Descrete Code	Dolby	Sound function		
				Type	Source Color	Simple UEI				Perfect Volume	Surround	BassBoost
55HDX99	HDX	Digital Tuner/Ext SPLIT	X	Rotate	PANA/Black	X	X	X	AC3 Downmix	×	×	×
55HDT79	HDT	Digital Tuner/Ext SPLIT	-	Rotate	PANA/Black	-	X	X	AC3 Downmix	×	×	×
55HDS69	HDS	Digital Tuner/Ext SPLIT	-	TVU	Hoshiden/BLACK	-	-	X	AC3 Downmix	×	×	×

Model Name	Class	TV Center	Output Watt	Speaker	Rear Jacks											
					Digital I/F		RS232C	IR-Out	YPbPr	S IN	AV IN	S OUT	V OUT	AUDIO OUPUT	Y As Composite	6CH OUT	RF
					IEEE1394	HDMI(Ver1.1)											
55HDX99	HDX	L/mono	36	2FR2W	1	2	1	2	2(1H,2H,2.14H)	2	4	1	1	1	X	OPT	1
55HDT79	HDT	L/mono	36	2FR2W	-	2	1	2	2(1H,2H,2.14H)	2	4	1	1	1	X	OPT	1
55HDS69	HDS	L/mono	36	2FR2W	-	2	1	-	2(1H,2H,2.14H)	2	4	1	1	1	X	OPT	1

Model Name	Class	Front/Side Jack			
		Composite	L/R	HDMI (Ver1.1)	Y,Pb,Pr
55HDX99	HDX	1	1	1	1
55HDT79	HDT	1	1	1	1
55HDS69	HDS	1	1	1	1

Model Name	Class	Power LED	Downloadable V Chip	Energy Star	PLC	Option Wall mount	Swivel Pow/Manual	Table Top Stand	Hotel Mode	Adjust Color Decoder	Color Manage	Contrast Mode
55HDX99	HDX	Blue	X	X	X	WM51	Pow	× (STF551)	×	X	X	X
55HDT79	HDT	Blue	X	X	X	WM51	Pow	× (STF552S)	×	X	X	X
55HDS69	HDS	Blue	X	X	X	WM51	Manual	× (STF552S)	×	-	-	X

(OPT)
Stand sold separately

Model Name	Class	White Level Black Level
55HDX99	HDX	X
55HDT79	HDT	-
55HDS69	HDS	-

General Specification

Model Spec

Model NameItem		55HDS69/55HDT79/55HDX99
Destination		U.S.A. / CANADA
Exterior	Cabinet Dimensions (Main Body) (Speaker & stand inclusive)	1510mm x 840mm x 119mm
	Frame Color Screen	Dark Charcoal Metallic (HDT/HDX) Brightness Silver (HDS)
	Stand	Inclusive (With Power Swivel)
	Weight (Main Body) (Speaker & stand inclusive) (Main Body: Packed)	59 kg typ. 69.0 kg
	Screen Size	1229.4x691.2mm(55Inch 16:9)
Display Panel	Resolution	1366x768 pixels
	Dot Pitch (H)	0.90mm
	Dot Pitch (V)	0.90mm
	Viewing Angle (H)	±85°
	Viewing Angle (V)	±85°
Front Filter	Surface Finishing	0.1ohm mesh
Brightness	Peak Brightness (1% window)	240 cd/m^2 or more (When VIDEO, Day mode, Color temperature 'HIGH' Input Signal Amplitude 100 % is set)
	All White Pattern	
Contrast	Contrast ratio	1000 : 1 (typ)
Color Reproduction	Color Reproduction	16.7 million colors or more
Audio Output	Audio Output	18W+ 18W(6ohm>,10%Distortion)
Panel Operation	Main Power Switch	PUSH (LOCK) 1 switch
	Power Switch	PUSH (NON-LOCK) 1 switch
Input Terminal	Video/Audio Input	RCA , HDMI DV connector
Output Terminal	Audio Line Output	Sub Woofer Output 1 system
	Speaker Output	-
Power Supply Source	Connector	3 Polarity Receptacle
	Input Voltage	Single Phase AC108-132V, 6 OHz
Guaranteed Environment Condition	Temp. (Operating)	5~35°C (41F~95F)
	Temperature (Stored)	-15~60°C (5F~140F)
	Humidity (Operating)	20~80%RH (Non-condensing)
	Humidity (Stored)	20~90%RH (Non-condensing)
	Atmospheric Pressure (Operating)	800 to 1114hPa (altitude: 1888m to -757m, 6194feet to -2483feet)
	Atmospheric Pressure (Storage)	300 to 1114hPa (Altitude: 9727m to -757m, 31912feet to -2483feet)

Environment Specifications

NO	Item	Specification
1	Operating Temp.	+5℃~+35℃
2	Stock Temp.	-15℃~+60℃
3	Operating Humidity	20%~80%RH
4	Stock Humidity	20%~90%RH
5	Operating Atmosphere Pressure	800~1114h Pa (1888m~-757m)
6	Stock Atmosphere Pressure	300~1114h P a (4727m~-757m)
7	Warranty Gravity Vertical	0.85 G
8	Warranty Drop High	30cm
9	Tilt Angle	12° Over

Display Specification

Picture Format for Each Input Source
Aspect, Virtual HD, Black Side Panel, Vertical Position, PIP Mode

9.1.1 Aspect

Yes : Selectable - : Un-selectable

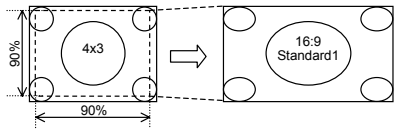
Input Signal			Auto Aspect	Aspect Video ID	Aspect 16:9 Standard 1	16:9 Standard 2	16:9 Zoom	4:3 Standard	4:3 Expanded	4:3 Zoom 1	4:3 Zoom 2
ANT Analog	Video	NTSC	-	4x3	Yes	-	Yes	Yes	Yes	Yes	Yes
ANT Digital	YC_BC_R	480p	-	16x9	Yes	-	Yes	-	Yes	-	-
		480i	-	4x3	-	-	-	Yes	Yes	Yes	Yes
	YP_BP_R	1080i/720p	-	16x9	Yes	Yes	Yes	-	Yes	-	-
IEEE1394 Digital	YC_BC_R	480p	-	16x9	Yes	-	Yes	-	Yes	-	-
		480i	-	4x3	-	-	-	Yes	Yes	Yes	Yes
	YP_BP_R	1080i/720p	-	16x9	Yes	Yes	Yes	-	Yes	-	-
	-	-	-	1394DV	-	-	-	Yes	Yes	Yes	Yes
Input 1	HDMI	1080i/720p	-	16x9	Yes	Yes	Yes	-	Yes	-	-
		480p 480i	Auto ON	16x9	Yes Initial	-	Yes	-	-	-	-
				Letter	-	-	-	Yes	Yes	Yes Initial	Yes
				4x3	-	-	-	Yes	Yes Initial	Yes	Yes
				No Info	Yes	-	Yes	Yes	Yes	Yes	Yes
			Auto OFF	-	Yes	-	Yes	Yes	Yes	Yes	Yes
	Video S-Video	NTSC	Auto ON	16x9	Yes Initial	-	Yes	-	-	-	-
				Letter	-	-	-	Yes	Yes	Yes Initial	Yes
				4x3	-	-	-	Yes	Yes Initial	Yes	Yes
				No ID	Yes	-	Yes	Yes	Yes	Yes	Yes
			Auto OFF	-	Yes	-	Yes	Yes	Yes	Yes	Yes
Input 2	HDMI	1080i/720p	-	16x9	Yes	Yes	Yes	-	Yes	-	-
		480p 480i	Auto ON	16x9	Yes Initial	-	Yes	-	-	-	-
				Letter	-	-	-	Yes	Yes	Yes Initial	Yes
				4x3	-	-	-	Yes	Yes Initial	Yes	Yes
				No Info	Yes	-	Yes	Yes	Yes	Yes	Yes
			Auto OFF	-	Yes	-	Yes	Yes	Yes	Yes	Yes
	Video S-Video	NTSC	Auto ON	16x9	Yes Initial	-	Yes	-	-	-	-
				Letter	-	-	-	Yes	Yes	Yes Initial	Yes
				4x3	-	-	-	Yes	Yes Initial	Yes	Yes
				No ID	Yes	-	Yes	Yes	Yes	Yes	Yes
			Auto OFF	-	Yes	-	Yes	Yes	Yes	Yes	Yes
Input 3	YP_BP_R	1080i/720p	-	16x9	Yes	Yes	Yes	-	Yes	-	-
		480p 480i	Auto ON	16x9	Yes Initial	-	Yes	-	-	-	-
				Letter	-	-	-	Yes	Yes	Yes Initial	Yes
				4x3	-	-	-	Yes	Yes Initial	Yes	Yes
				No ID	Yes	-	Yes	Yes	Yes	Yes	Yes
			Auto OFF	-							
		No Signal	-	-							
	Video	NTSC	Auto ON	16x9	Yes Initial	-	Yes	-	-	-	-
				Letter	-	-	-	Yes	Yes	Yes Initial	Yes
				4x3	-	-	-	Yes	Yes Initial	Yes	Yes
				No ID	Yes	-	Yes	Yes	Yes	Yes	Yes
			Auto OFF	-							

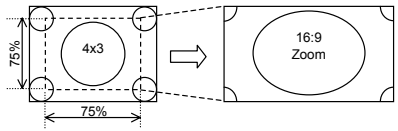
(Continuation)

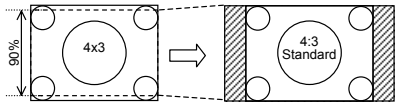
Input Signal			Auto Aspect	Aspect Video ID	Aspect 16:9 Standard 1	16:9 Standard 2	16:9 Zoom	4:3 Standard	4:3 Expanded	4:3 Zoom 1	4:3 Zoom 2
Input 4	YP_BP_R	1080i/720p	-	16x9	Yes	Yes	Yes	-	Yes	-	-
		480p 480i	Auto ON	16x9	Yes Initial	-	Yes	-	-	-	-
				Letter	-	-	-	Yes	Yes	Yes Initial	Yes
				4x3	-	-	-	Yes	Yes Initial	Yes	Yes
				No ID	Yes	-	Yes	Yes	Yes	Yes	Yes
			Auto OFF	-							
		No Signal	-	-							
	Video	NTSC	Auto ON	16x9	Yes Initial	-	Yes	-	-	-	-
				Letter	-	-	-	Yes	Yes	Yes Initial	Yes
				4x3	-	-	-	Yes	Yes Initial	Yes	Yes
				No ID	Yes	-	Yes	Yes	Yes	Yes	Yes
			Auto OFF	-							
Input 5	HDMI	1080i/720p	-	16x9	Yes	Yes	Yes	-	Yes	-	-
		480p 480i	Auto ON	16x9	Yes Initial	-	Yes	-	-	-	-
				Letter	-	-	-	Yes	Yes	Yes Initial	Yes
				4x3	-	-	-	Yes	Yes Initial	Yes	Yes
				No Info	Yes	-	Yes	Yes	Yes	Yes	Yes
			Auto OFF	-	Yes	-	Yes	Yes	Yes	Yes	Yes
	YP_BP_R	1080i/720p	-	16x9	Yes	Yes	Yes	-	Yes	-	-
		480p 480i	Auto ON	16x9	Yes Initial	-	Yes	-	-	-	-
				Letter	-	-	-	Yes	Yes	Yes Initial	Yes
				4x3	-	-	-	Yes	Yes Initial	Yes	Yes
				No ID	Yes	-	Yes	Yes	Yes	Yes	Yes
			Auto OFF	-							
		No Signal	-	-							
	Video	NTSC	Auto ON	16x9	Yes Initial	-	Yes	-	-	-	-
				Letter	-	-	-	Yes	Yes	Yes Initial	Yes
				4x3	-	-	-	Yes	Yes Initial	Yes	Yes
				No ID	Yes	-	Yes	Yes	Yes	Yes	Yes
			Auto OFF	-							
Horizontal Expansion				16x9	105%	100%	133%	-	133%	-	-
				4x3	105%	100%	133%	75%	100%	100%	133%
Vertical Expansion					105%	100%	133%	110%	110%	133%	176%

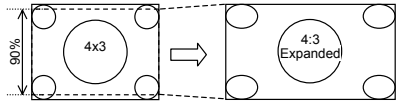
[Expansion]

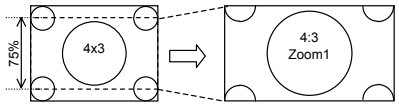
<4x3 Format>

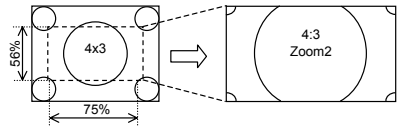




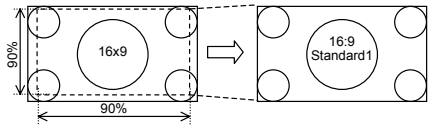


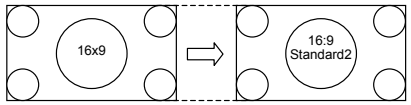


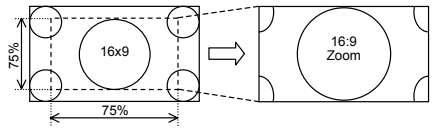


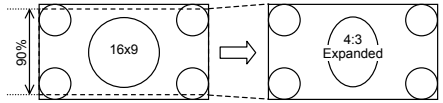


<16x9 Format>

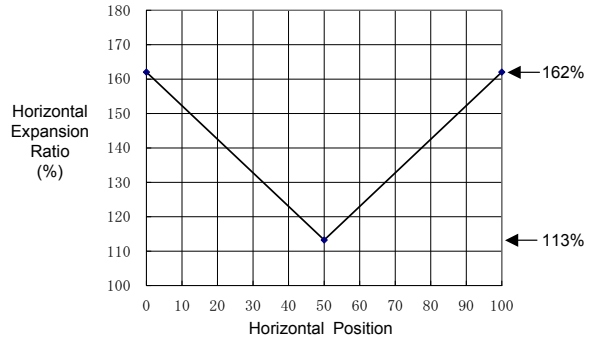


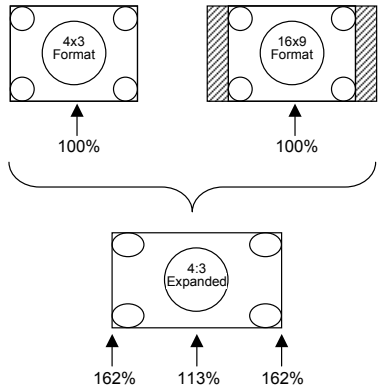






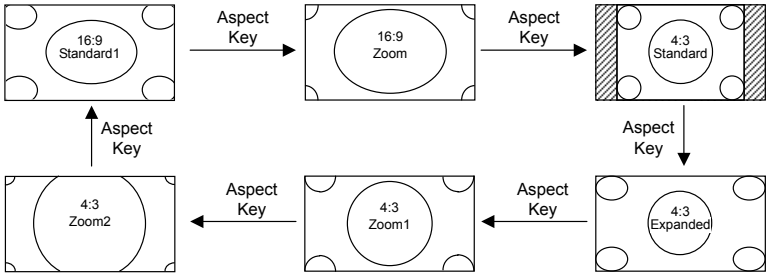
4:3 Expanded Mode





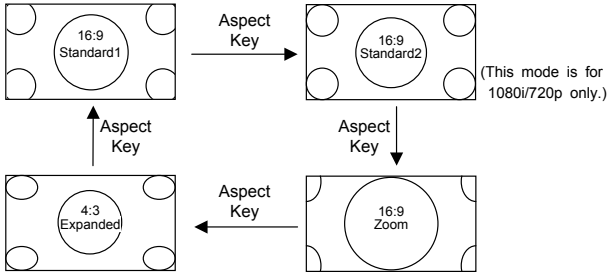
Aspect Key Operation

(1) ANT Analog Channel

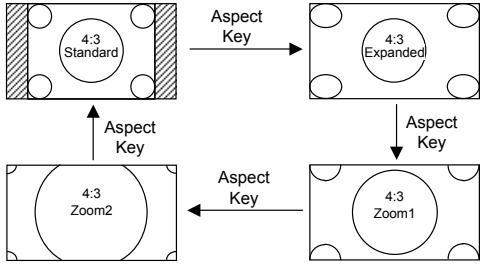


(2) ANT Digital Channel

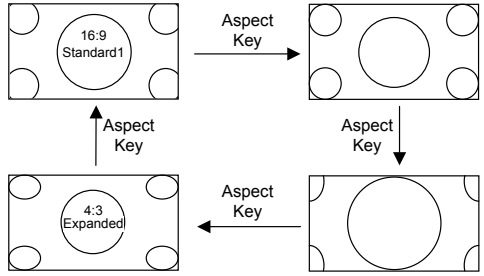
(a) Aspect: 16x9



(b) Aspect: 4x3

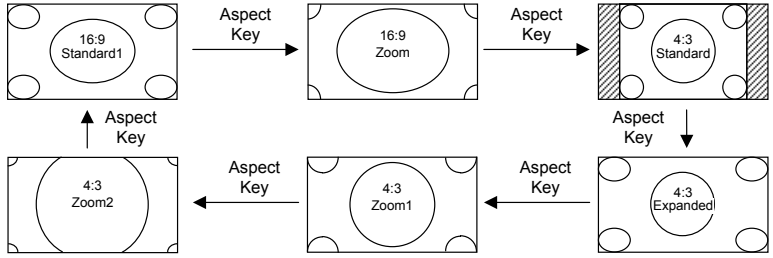


(3) HDMI/YPBPR: 1080i/720p



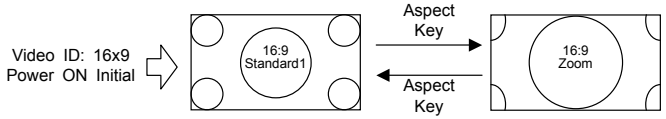
(4) HDMI/YPBPR: 480p/480i, Video/S-Video

(4-1) Auto Aspect OFF

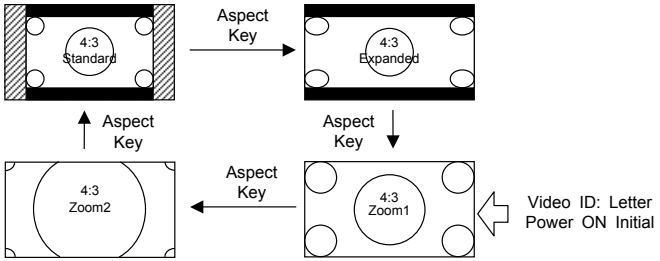


(4-2) Auto Aspect ON

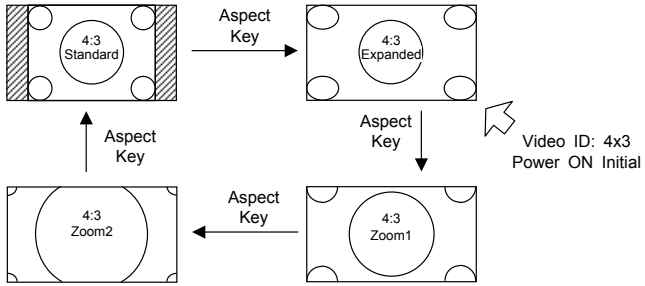
(a) Video ID/HDMI Info: 16x9



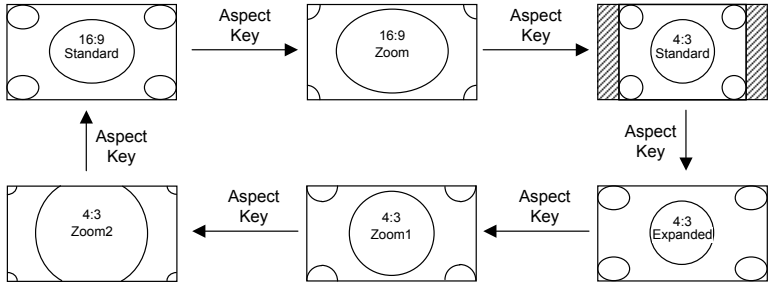
(b) Video ID/HDMI Info: Letter



(c) Video ID/HDMI Info: 4x3



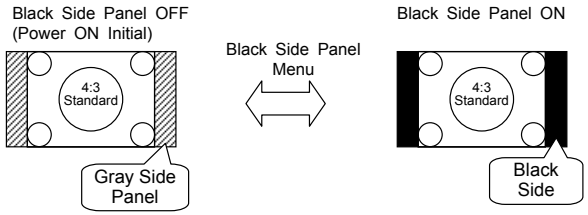
(d) No Video ID, No HDMI Info



Vertical Position Operation

Input				Vertical Position					
				16:9 Standard1/2	16:9 Zoom	4:3 Standard	4:3 Expanded	4:3 Zoom 1	4:3 Zoom 2
ANT Analog	Video	NTSC	4x3	±0 step Gray out	±10 step (±30 lines)	±0 step Gray out	±10 step (±10 lines)	±10 step (±30 lines)	±10 step (±50 lines)
ANT Digital	YPBPR	1080i 720p	16x9	±0 step Gray out	±10 step (±30 lines)	-	±10 step (±10 lines)	-	-
		480p	4x3	-	-	±0 step Gray out	±10 step (±10 lines)	±10 step (±30 lines)	±10 step (±50 lines)
		480i	16x9	±0 step Gray out	±10 step (±30 lines)	-	±10 step (±10 lines)	-	-
			4x3	-	-	±0 step Gray out	±10 step (±10 lines)	±10 step (±30 lines)	±10 step (±50 lines)
IEEE1394	YPBPR	1080i 720p	16x9	±0 step Gray out	±10 step (±30 lines)	-	±10 step (±10 lines)	-	-
		480p 480i	4x3	-	-	±0 step Gray out	±10 step (±10 lines)	±10 step (±30 lines)	±10 step (±50 lines)
Input 1 - 2	HDMI	1080i 720p	16x9	±0 step Gray out	±10 step (±30 lines)	-	±10 step (±10 lines)	-	-
		480p 480i	16x9 4x3	±0 step Gray out	±10 step (±30 lines)	±0 step Gray out	±10 step (±10 lines)	±10 step (±30 lines)	±10 step (±50 lines)
	S-Video Video	NTSC	-	±0 step Gray out	±10 step (±30 lines)	±0 step Gray out	±10 step (±10 lines)	±10 step (±30 lines)	±10 step (±50 lines)
Input 3 - 4	YPBPR	1080i 720p	16x9	±0 step Gray out	±10 step (±30 lines)	-	±10 step (±10 lines)	-	-
		480p 480i	16x9 4x3	±0 step Gray out	±10 step (±30 lines)	±0 step Gray out	±10 step (±10 lines)	±10 step (±30 lines)	±10 step (±50 lines)
	Video	NTSC	-	±0 step Gray out	±10 step (±30 lines)	±0 step Gray out	±10 step (±10 lines)	±10 step (±30 lines)	±10 step (±50 lines)
Input5	HDMI	1080i 720p	16x9	±0 step Gray out	±10 step (±30 lines)	-	±10 step (±10 lines)	-	-
		480p 480i	16x9 4x3	±0 step Gray out	±10 step (±30 lines)	±0 step Gray out	±10 step (±10 lines)	±10 step (±30 lines)	±10 step (±50 lines)
	YPBPR	1080i 720p	16x9	±0 step Gray out	±10 step (±30 lines)	-	±10 step (±10 lines)	-	-
		480p 480i	16x9 4x3	±0 step Gray out	±10 step (±30 lines)	±0 step Gray out	±10 step (±10 lines)	±10 step (±30 lines)	±10 step (±50 lines)
	Video	NTSC	-	±0 step Gray out	±10 step (±30 lines)	±0 step Gray out	±10 step (±10 lines)	±10 step (±30 lines)	±10 step (±50 lines)
PIP Mode	SPLIT/POP/ PIP/STROBE			±0 step Gray out					

9.1.4 Black Side Panel Operation



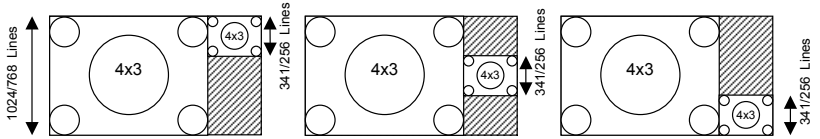
PIP Mode

PIP Mode	Main \ Sub		Digital						Component/Composite/S-IN/HDMI					
			1080i	720p	480p	480p	480i	480i	1080i	720p	480p	480p	480i	480i
			16x9	16x9	16x9	4x3	16x9	4x3	16x9	16x9	16x9	4x3	16x9	4x3
POP	Digital (Air or Cable)	1080i	16x9	-	-	-	-	-	-	-	-	-	-	-	-
		720p	16x9	-	-	-	-	-	-	-	-	-	-	-	-
		480p	16x9	-	-	-	-	-	-	-	-	-	-	-	-
		480p	4x3	-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
		480i	16x9	-	-	-	-	-	-	-	-	-	-	-	-
		480i	4x3	-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
	Component Composite S-IN HDMI	1080i	16x9	-	-	-	-	-	-	-	-	-	-	-	-
		720p	16x9	-	-	-	-	-	-	-	-	-	-	-	-
		480p	16x9	Yes*1	Yes*1	Yes*1	Yes*1	Yes*1	Yes*1	-	-	-	-	-	-
		480p	4x3	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
		480i	16x9	Yes*1	Yes*1	Yes*1	Yes*1	Yes*1	Yes*1	-	-	-	-	-	-
		480i	4x3	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
PIP 16x9	Digital (Air or Cable)	1080i	16x9	-	-	-	-	-	-	Yes	Yes	Yes*2	-	Yes*2	-
		720p	16x9	-	-	-	-	-	-	Yes	Yes	Yes*2	-	Yes*2	-
		480p	16x9	-	-	-	-	-	-	Yes	Yes	Yes*2	-	Yes*2	-
		480p	4x3	-	-	-	-	-	-	-	-	-	-	-	-
		480i	16x9	-	-	-	-	-	-	Yes	Yes	Yes*2	-	Yes*2	-
		480i	4x3	-	-	-	-	-	-	-	-	-	-	-	-
	Component Composite S-IN HDMI	1080i	16x9	Yes	Yes	Yes	-	Yes	-	-	-	-	-	-	-
		720p	16x9	Yes	Yes	Yes	-	Yes	-	-	-	-	-	-	-
		480p	16x9	Yes*2	Yes*2	Yes*2	-	Yes*2	-	-	-	-	-	-	-
		480p	4x3	-	-	-	-	-	-	-	-	-	-	-	-
		480i	16x9	Yes*2	Yes*2	Yes*2	-	Yes*2	-	-	-	-	-	-	-
		480i	4x3	-	-	-	-	-	-	-	-	-	-	-	-
PIP 4x3	Digital (Air or Cable)	1080i	16x9	-	-	-	-	-	-	-	-	Yes*1	Yes	Yes*1	Yes
		720p	16x9	-	-	-	-	-	-	-	-	Yes*1	Yes	Yes*1	Yes
		480p	16x9	-	-	-	-	-	-	-	-	Yes*1	Yes	Yes*1	Yes
		480p	4x3	-	-	-	-	-	-	-	-	-	-	-	-
		480i	16x9	-	-	-	-	-	-	-	-	Yes*1	Yes	Yes*1	Yes
		480i	4x3	-	-	-	-	-	-	-	-	-	-	-	-
	Component Composite S-IN HDMI	1080i	16x9	-	-	-	Yes	-	Yes	-	-	-	-	-	-
		720p	16x9	-	-	-	Yes	-	Yes	-	-	-	-	-	-
		480p	16x9	-	-	-	Yes*2	-	Yes*2	-	-	-	-	-	-
		480p	4x3	-	-	-	-	-	-	-	-	-	-	-	-
		480i	16x9	-	-	-	Yes*2	-	Yes*2	-	-	-	-	-	-
		480i	4x3	-	-	-	-	-	-	-	-	-	-	-	-
SPLIT	Digital (Air or Cable)	1080i	16x9	-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
		720p	16x9	-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
		480p	16x9	-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
		480p	4x3	-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
		480i	16x9	-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
		480i	4x3	-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
	Component Composite S-IN HDMI	1080i	16x9	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
		720p	16x9	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
		480p	16x9	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
		480p	4x3	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
		480i	16x9	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
		480i	4x3	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
STROBE (4pix)	Digital (Air or Cable)	1080i	16x9	Yes	-	-	-	-	-	-	-	-	-	-	-
		720p	16x9	-	Yes	-	-	-	-	-	-	-	-	-	-
		480p	16x9	-	-	Yes	-	-	-	-	-	-	-	-	-
		480p	4x3	-	-	-	Yes	-	-	-	-	-	-	-	-
		480i	16x9	-	-	-	-	Yes	-	-	-	-	-	-	-
		480i	4x3	-	-	-	-	-	Yes	-	-	-	-	-	-
	Component Composite S-IN HDMI	1080i	16x9	-	-	-	-	-	-	Yes	-	-	-	-	-
		720p	16x9	-	-	-	-	-	-	-	Yes	-	-	-	-
		480p	16x9	-	-	-	-	-	-	-	-	Yes	-	-	-
		480p	4x3	-	-	-	-	-	-	-	-	-	Yes	-	-
		480i	16x9	-	-	-	-	-	-	-	-	-	-	Yes	-
		480i	4x3	-	-	-	-	-	-	-	-	-	-	-	Yes

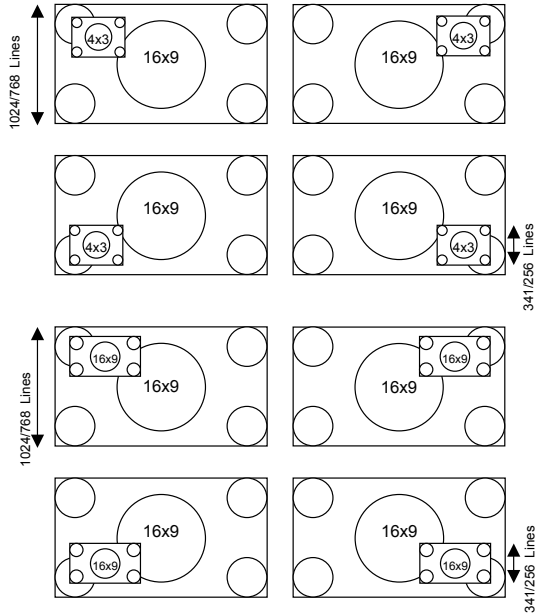
Yes*1: Auto Aspect OFF

Yes*2: Auto Aspect ON

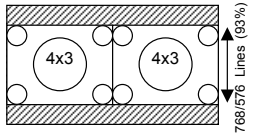
POP Mode:



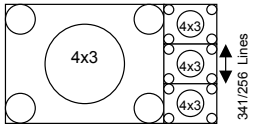
PIP Mode:



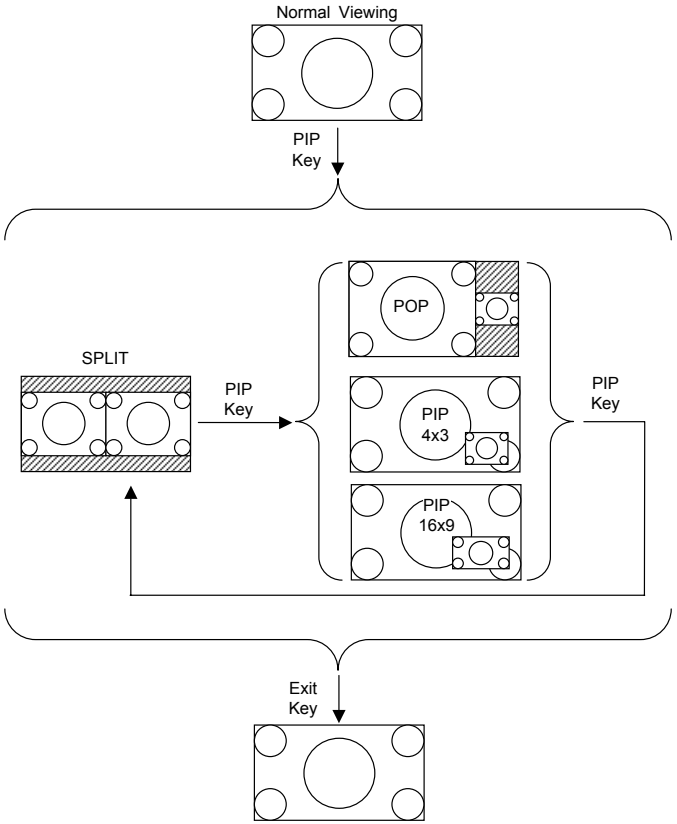
SPLIT Mode:



STROBE Mode:

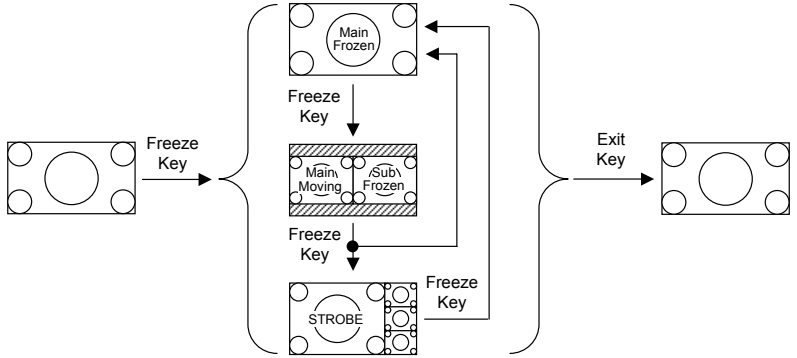


(1) PIP Key Operation

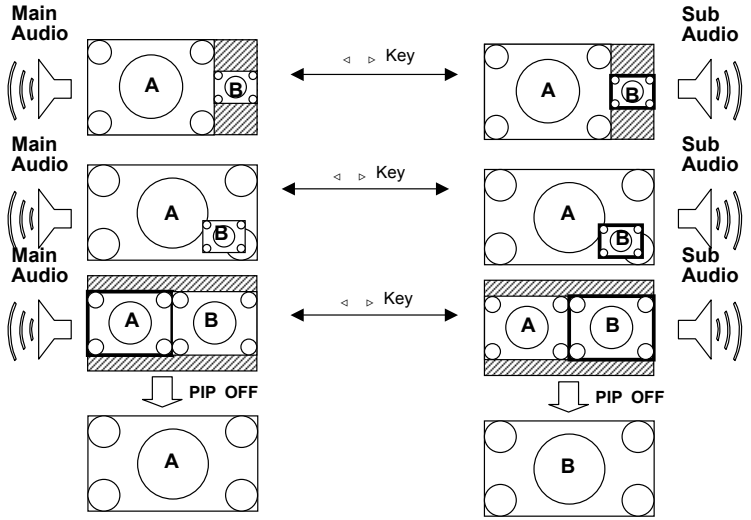


(Note)
If PIP Key is pushed from a Normal screen, PIP of Last Mode will be displayed.
A shipment setup of PIP Mode is SPLIT Mode.
POP/PIP Mode cannot display 720p/480p signals. Therefore, it displays by SPLIT Mode.
· When Last mode is POP/PIP Mode and a Main signal is 1080i, PIP Mode is set to PIP.
· When Last mode is POP/PIP Mode and a Main signal is 480i/NTSC, PIP Mode is set to PIP.
· SURF Mode is not displayed at a V-Chip setup. SPLIT Mode is displayed at this time.
When EXIT Key is pushed, PIP turns off.
When PIP is turns off, PIP Mode of a display turns into Last Mode.

(2) Freeze Operation



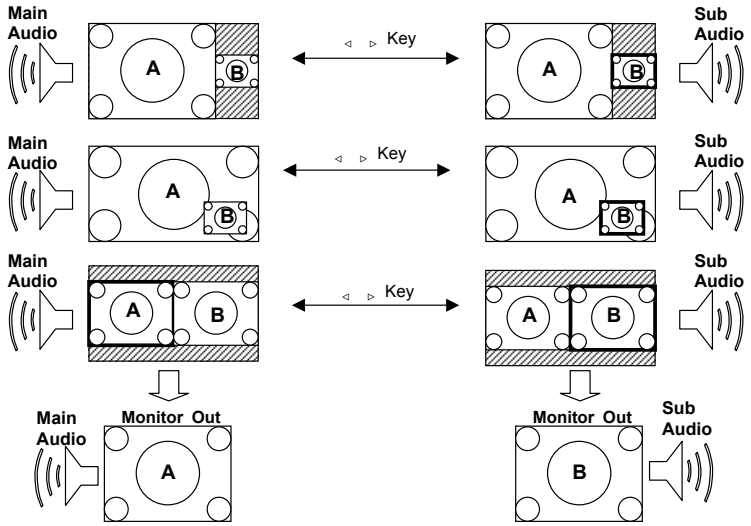
(3) SWAP Operation



(Note)
When right and left Key are pushed, the sound of Main and Sub interchanges.
A Channel/Input change can do the screen out of which the sound has come.
When PIP OFF [EXIT Key], the screen where sound is sounding turns into a normal screen.

(4) Monitor Out

(4-1) Set the Monitor out: Monitor out



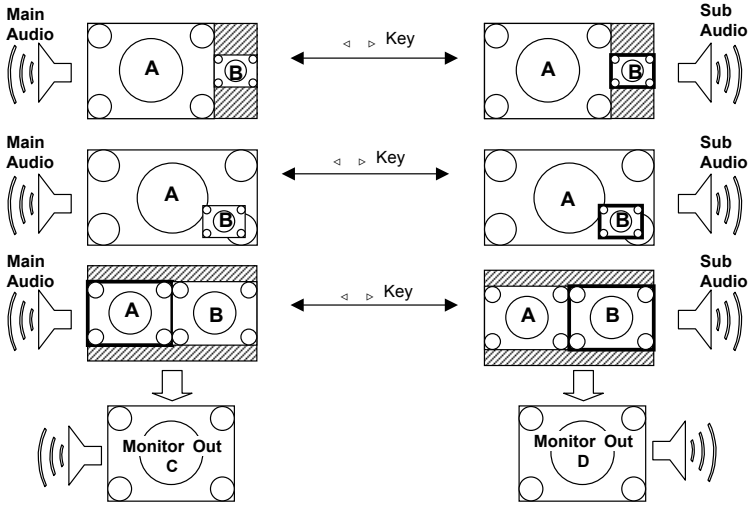
(Note)

When right and left Key are pushed, the sound of Main and Sub interchanges.
The picture and sound of the selected picture are outputted from Monitor out.
When the selected picture is Component or HDMI signal and audio out is monitor, monitor out is no picture and no audio.
When the selected picture is Component or HDMI signal and audio out is HiFi out, monitor out is no picture but audio is output.
When the selected picture is Composite Video signal, S-Video of monitor out is no picture.
When Macrovision signal is included in the ANT Digital channel, monitor out is no picture and no audio.

Main/Sub Audio Select

Input Mode				Monitor Out			
				S-Video	Video	L/R	HiFi
ANT (AIR or CABLE)	Digital Channel	No Macrovision	S-Video	YES	YES	YES	YES
		Macrovision	S-Video	-	-	-	YES
	Analog Channel		Video	-	YES	YES	YES
Input1	HDMI_1			-	-	-	YES
	S-Video_1			YES	YES	YES	YES
	Video_1			-	YES	YES	YES
Input2	HDMI_2			-	-	-	YES
	S-Video_2			YES	YES	YES	YES
	Video_2			-	YES	YES	YES
Input3	YP_BP_R_3			-	-	-	YES
	Video_3			-	YES	YES	YES
Input4	YP_BP_R_4			-	-	-	YES
	Video_4			-	YES	YES	YES
Input5 Side	HDMI_5			-	-	-	YES
	YP_BP_R_5			-	-	-	YES
	Video_5			-	YES	YES	YES

(4-2) Set the Monitor out: TV out



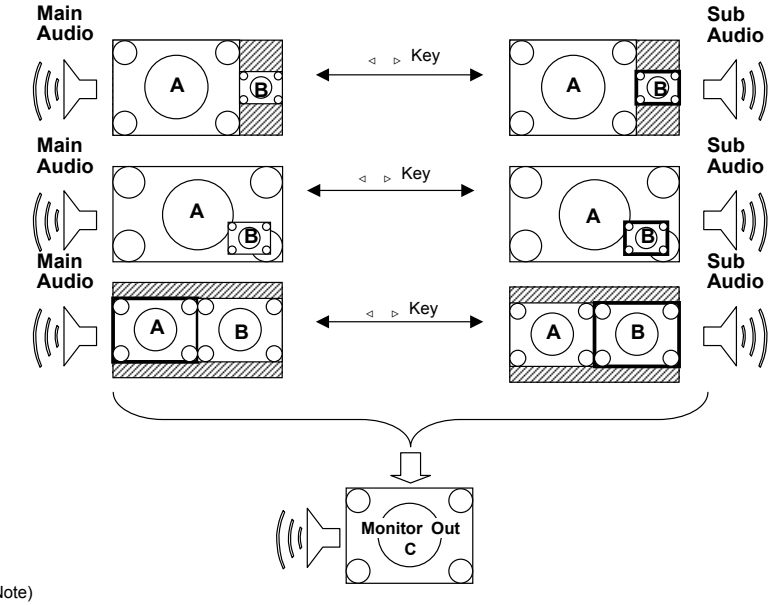
(Note)

When right and left Key are pushed, the sound of Main and Sub interchanges.
The picture and sound of ANT is outputted from Monitor out.
When ANT is analog channel, S-Video of monitor out is no picture.
When Macrovision signal is included in the ANT Digital channel, monitor out is no picture and no audio.

Main/Sub Audio Select

Input Mode				Monitor Out: TV out			
				S-Video	Video	L/R	HiFi
ANT (AIR or CABLE)	Digital Channel	No Macrovision	S-Video	YES ANT	YES ANT	YES ANT	YES ANT
		Macrovision	S-Video	-	-	-	YES ANT
	Analog Channel		Video	-	YES ANT	YES ANT	YES ANT
Input_1	HDMI_1		YP_BP_R	YES ANT Digital only	YES ANT	YES ANT	YES ANT
	S-Video_1						
	Video_1						
Input_2	HDMI_2		YP_BP_R				
	S-Video_2						
	Video_2						
Input_3	YP_BP_R_3						
	Video_3						
Input_4	YP_BP_R_4						
	Video_4						
Input_5 Side	HDMI_5		YP_BP_R				
	YP_BP_R_5						
	Video_5						

(4-3) At the time of reservation videotape recording



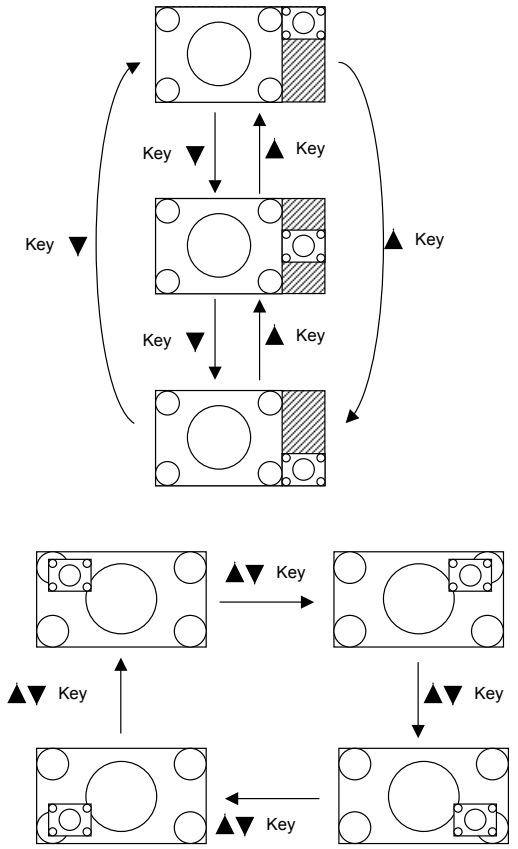
(Note)
At the time of reservation videotape recording, the picture and sound of ANT is outputted from Monitor out.
When Macrovision signal is included in the ANT Digital channel, monitor out is no picture and no audio.

Main Audio Select

Input Mode				Monitor Out: TV out			
				S-Video	Video	L/R	HiFi
ANT (AIR or CABLE)	Digital Channel	No Macrovision	S-Video	YES ANT	YES ANT	YES ANT	YES ANT
		Macrovision	S-Video	-	-	-	YES ANT
	Analog Channel		Video	-	YES ANT	YES ANT	YES ANT
Input_1	HDMI_1		YP_BP_R	YES ANT Digital only	YES ANT	YES ANT	YES ANT
	S-Video_1						
	Video_1						
Input_2	HDMI_2		YP_BP_R				
	S-Video_2						
	Video_2						
Input_3	YP_BP_R_3						
	Video_3						
Input_4	YP_BP_R_4						
	Video_4						
Input_5 Side	HDMI_5		YP_BP_R				
	YP_BP_R_5						
	Video_5						

When Macrovision signal is included in the ANT Digital channel, monitor out is no picture and no audio.

(4) PIP Position Operation



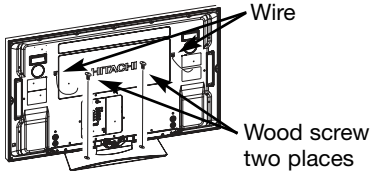
(Note)
The Sub screen position of POP Mode moves up and down by the upper and lower sides Key.
A Sub screen position of PIP Mode moves clockwise by the upper and lower sides Key.

How To Set Up Your New Hitachi Plasma Television

To take measures to prevent the Plasma Display from tipping over and prevent possible injury it is important to mount the unit in a stable and flat surface.

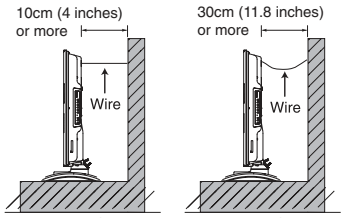
Securing to a table-top

1. Using wood screws (two) fasten the set to the clamping screw holes on the rear of the Plasma Display stand as shown below.
2. Using commercially available wood screws, secure the set firmly in position.



Securing to a Wall

1. Keep the Plasma television 4 inches away from the wall except when mounted using the wall mount bracket.
2. Secure the television to the wall as shown in fig. (a) or (b).



(a) Power Swivel NOT USED

(b) Power Swivel USED

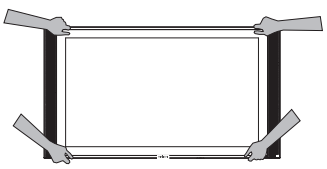
		A	B
42"		4 in.	12 in.
		10 cm	30 cm
55"		4 in.	16 in.
		10 cm	39 cm

NOTES:

1. *Do not block the ventilation holes of the Plasma Display monitor. Blocking the ventilation holes might cause fire or defect.*
2. *In case of an abnormal symptom, unplug the AC cord.*
3. *If you purchased the wall mount bracket option, please ask for professional installer. Do not install by yourself.*
4. *If the Power Swivel feature will not be used, the Plasma television should be secured to the wall as shown in fig. (a).*
5. *If the Power Swivel feature will be used, the Plasma television should be secured to the wall as shown in fig. (b). The wires need to be long enough to allow the television to turn 30˚ to the left and right.*

Caution when moving the main unit

As this product is heavy, whenever it is moved, two people are required to transport it safely. Whenever the unit is moved it should be lifted forward using the top and base on both sides of the Display Monitor for stability. When moving the Display Monitor, lift the handles and the bottom frame as shown below. Do not grab the speakers or the back cover when lifting.



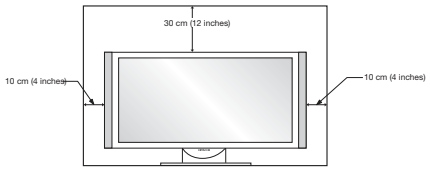
55”

ANTENNA

Unless your Plasma Television is connected to a cable TV system or to a centralized antenna system, a good outdoor color TV antenna is recommended for best performance. However, if you are located in an exceptionally good signal area that is free from interference and multiple image ghosts, an indoor antenna may be sufficient.

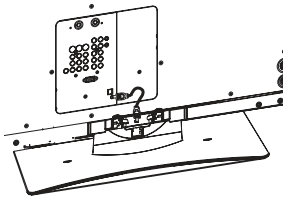
LOCATION

Select an area where sunlight or bright indoor illumination will not fall directly on the picture screen. Also, be sure that the location selected allows a free flow of air to and from the perforated back cover of the set. In order to prevent an internal temperature increase, maintain a space of 10 cm (4 inches) from the sides/back of the monitor, and 30 cm (12 inches) from the top of the television to the wall. To avoid cabinet warping, cabinet color changes, and increased chance of set failure, do not place the TV where temperatures can become excessively hot, for example, in direct sunlight or near a heating appliance, etc.



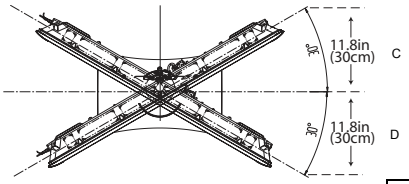
CONNECT POWER SWIVEL CABLE

Connect one end of cable (Arrow mark facing left) to the swivel slot of the Plasma Rear Panel. Connect the other end (Arrow mark facing front)to the swivel slot of the Table Top Stand.



TURNING RADIUS

The maximum turning radius is 30˚ (left and right). Do not place any objects on the path of the monitor when using the power swivel feature.



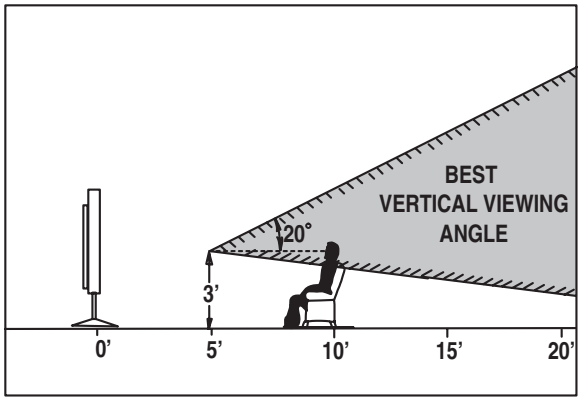
		C	D
42"		12 in.	12 in.
		30 cm	30 cm
55"		15.26 in.	16.46 in.
		38.77 cm	41.8 cm

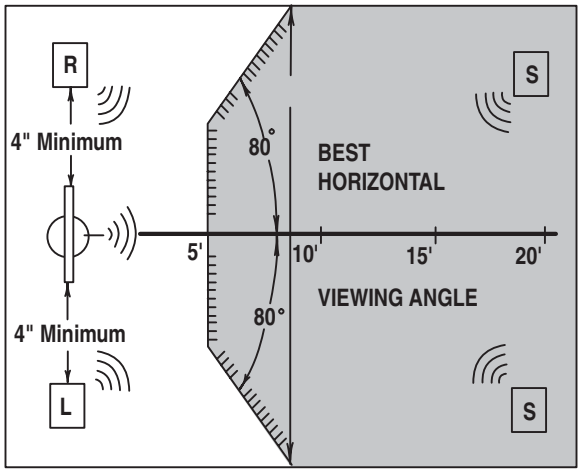
VIEWING

The best picture is seen by sitting directly in front of the TV and about 10 to 18 feet from the screen.

During daylight hours, reflections from outside light may appear on the screen. If so, drapes or screens can be used to reduce the reflection or the TV can be located in a different section of the room.

If the TV's audio output will be connected to a Hi-Fi system's external speakers, the best audio performance will be obtained by placing the speakers equidistant from each side of the receiver cabinet and as close as possible to the height of the picture screen center. For best stereo separation, place the external speakers at least four feet from the side of the TV, place the surround speakers to the side or behind the viewing area. Differences in room sizes and acoustical environments will require some experimentation with speaker placement for best performance.





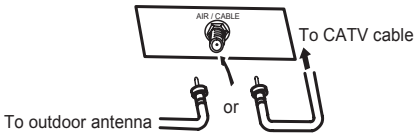
ANTENNA CONNECTIONS TO REAR JACK PANEL

VHF (75-Ohm) antenna/CATV (Cable TV)

When using a 75-Ohm coaxial cable system, connect **CATV** coaxial cable to the AIR/CABLE (75-Ohm) terminal. Or if you have an antenna, connect the coaxial cable to the same AIR/CABLE terminal.

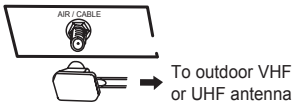
VHF (300-Ohm) antenna/UHF antenna

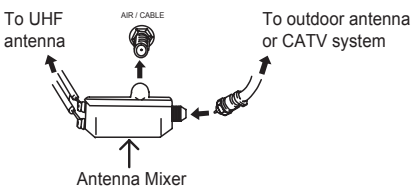
When using a 300-Ohm twin lead from an outdoor antenna, connect the **VHF** or **UHF** antenna leads to screws of the **VHF** or **UHF** adapter. Plug the adapter into the antenna terminal on the TV.



When both VHF and UHF antennas are connected

Attach an optional antenna cable mixer to the TV antenna terminal, and connect the cables to the antenna mixer. Consult your dealer or service store for the antenna mixer.



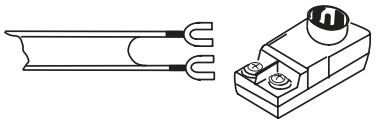


NOTE: *Connecting a 300-Ohm twin lead connector may cause interference. Using a 75-Ohm coaxial cable is recommended.*

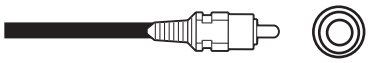
Hook-up Cables and Connectors

Most video/audio connections between components can be made with shielded video and audio cables that have phono connectors. For best performance, video cables should use 75-Ohm coaxial shielded wire. Cables can be purchased from most stores that sell audio/video products. Below are illustrations and names of common connectors. Before purchasing any cables, be sure of the output and input connector types required by the various components and the length of each cable.

300-Ohm Twin Lead Connector
This outdoor antenna cable must be connected to an antenna adapter (300-Ohm to 75-Ohm).

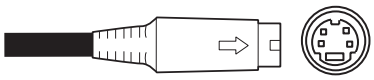


Phono Connector
Used on all standard video and audio cables which connect to inputs and outputs located on the television's rear jack panel and front control panel.

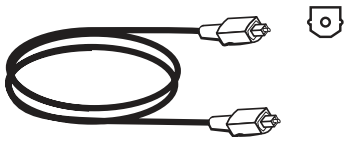


"F" Type 75-Ohm Coaxial Antenna Connector
For connecting RF signals (antenna or cable TV) to the antenna jack on the television.

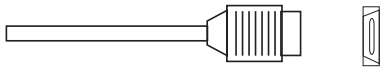
S-Video (Super Video) Connector
This connector is used on camcorders, VCRs and laser-disc players with an S-Video feature in place of the standard video cable to produce a high quality picture.



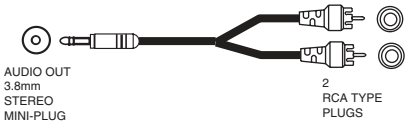
Optical Cable
This cable is used to connect to an audio amplifier with an Optical Audio In jack. Use this cable for the best sound quality.



HDMI Cable
This cable is used to connect your external devices such as Set-Top-Boxes or DVD players equipped with an **HDMI** output connection to the TV's **HDMI** input.

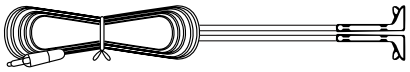


Stereo Cable (3.8mm plug to 3.5mm plug)
Used on all standard video and audio cable which connect to inputs and outputs located on the rear jack panel and front control panel.



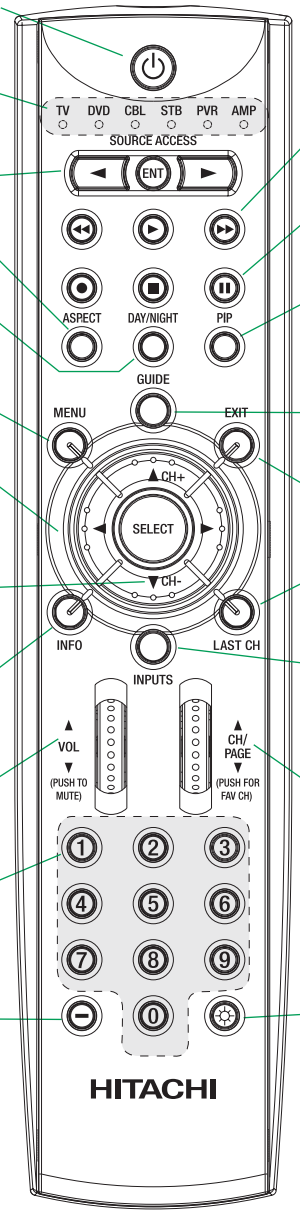
USB Cable (HDT & HDX only)
This cable is used to connect your digital camera to the Photo Input in the side of the Plasma television.

IR Mouse Cable (Provided) (HDT & HDX only)
Connect the IR Mouse to the IR output of your Plasma Television when A/V Network is used. You must place the IR mouse in front of the corresponding IR window of your cable box and VCR. This connection allows your TV to control your cable box and VCR.



Power Swivel Cable (Provided) (HDT & HDX only)
This cable is used to connect the swivel stand to the rear panel of the Plasma Television.

55HDT79 and 55HDX99 Models Only



POWER BUTTON
(TV, DVD, CBL, STB, PVR/VCR, AMP/CD)
Turns the selected device on and off.

MODE INDICATOR
Turns on or blinks to show remote control mode when the SOURCE ACCESS buttons are pressed.

SOURCE ACCESS BUTTONS
(TV, DVD, CBL, STB, PVR/VCR, AMP/CD)
Changes the mode of the Universal Remote Control to control the device selected.

ASPECT BUTTON
(TV)
Changes the aspect ratio of the TV.

DAY/NIGHT
(TV)
Toggles picture mode settings between DAY and NIGHT mode.

MENU BUTTON
(TV, DVD, CBL, STB, PVR/VCR)
Accesses the OSD menu system.

CURSOR PAD/SELECT BUTTON
(TV, DVD, CBL, STB, PVR/VCR)
The Cursor Pad is used as a cursor to navigate through the OSD and INPUT menu systems. The Select button is used to Select/Activate highlighted menu items.

CURSOR UP & DOWN /CH + & CH - BUTTON
(TV, CBL, STB, VCR)
The CH+ or CH- is used to change channels up or down. The Cursor UP or DOWN to navigate through the OSD and INPUT menu systems.

INFO BUTTON
(TV, STB, CBL, PVR)
Displays various information on the screen, such as channel information.

VOLUME WHEEL
(TV, AMP/CD)
Scroll up and down to adjust the audio level of your TV. Push down on the wheel to mute.

NUMERIC BUTTONS
(TV, DVD, CBL, STB, PVR/VCR, AMP/CD)
Used to manually enter the TV channel, and used for numeric entry when navigating through the OSD, INPUTS, and AV NET menu systems.

(-) BUTTON
(TV,STB)
The (-) button is used when the remote is in Set-Top-Box (STB) mode or when the TV uses a digital input.

DVD/VCR CONTROL BUTTONS
(DVD, PVR/VCR, AMP/CD)
Controls the functions of your VCR, DVD and audio devices.

PAUSE BUTTON
(TV,PVR/VCR, DVD, AMP/CD)
Press to show and change the Freeze mode of the TV. Also used to pause other devices when the remote is in DVD, PVR/VCR, or AMP/CD mode.

PIP CONTROL BUTTONS
(TV)
Press to show and change the Picture-in-Picture mode.

GUIDE BUTTON
(TV, STB, CBL, PVR)
Accesses the TV Guide On Screen™ system (see page 54) of the TV or the program guide of other devices.

EXIT BUTTON
(TV, CBL, STB, PVR/VCR)
Exits out of the OSD, INPUTS or AV NET menu systems if their menu is displayed.

LAST CHANNEL BUTTON
(TV, CBL, STB, PVR)
Switches between the current and last channel viewed.

INPUTS BUTTON
(TV, AMP)
Accesses the INPUTS menu system.

CHANNEL WHEEL
(TV, CBL, STB, PVR/VCR, AMP/CD)
Scroll up or down to change channel. Push down on the wheel to access (FAV) Favorite Channel mode. (Favorite channel is only available for TV mode.)

LIGHT BUTTON
(TV, CBL, STB, PVR)
Press to use the back light feature. Can also be used to change backlight mode.

In addition to controlling all of the functions on your HITACHI Plasma TV, the remote control is designed to operate different types of devices, such as, DVD Players, Cable Boxes (CBL), set-top-boxes, satellite receivers, PVRs/VCRs and audio devices. The remote control must be programmed to control the chosen device. Refer to Instruction Book for detailed programming instructions.

LEGEND
TV - Television
DVD - Digital Video Disc Player
CBL - Cable Box
STB - Set-Top-Box/Satellite Receiver
PVR - Personal Video Recorder
VCR - Video Cassette Recorder/Player
AMP/CD - Amplifier/Compact Disc Player, Audio Devices

NOTES:
1. VCR precode is included in the PVR mode.
2. CD precode is included in the AMP mode.
3. Pressing any buttons will illuminate the backlight for 4 seconds while in Automatic mode (Default).

QUICK REFERENCE REMOTE CONTROL

In addition to controlling all of the functions on your HITACHI Plasma TV, the new remote control is designed to operate different types of devices, such as, DVD Players, CBL (Cable Boxes), set-top-boxes, satellite receivers, and VCRs. The remote control must be programmed to control the chosen device. Please see pages of the OWNERS GUIDE for a complete description of all features and programming of the Remote Control.

55HDS69 Model Only

POWER BUTTON (TV, CBL, VCR, DVD, SAT)
Turns the selected device on and off.

INPUTS BUTTON (TV)
Accesses the INPUTS menu system.

ASPECT BUTTON (TV)
Changes the aspect ratio while watching TV.

MENU BUTTON (CBL, DVD, SAT, TV)
Accesses the OSD menu system.

CURSOR/SELECT BUTTONS (TV, DVD, CBL, SAT)
The CURSOR buttons are used to navigate the cursor through the OSD and INPUTS menu systems, and the SELECT button is used to Select/Activate the highlighted menu item.

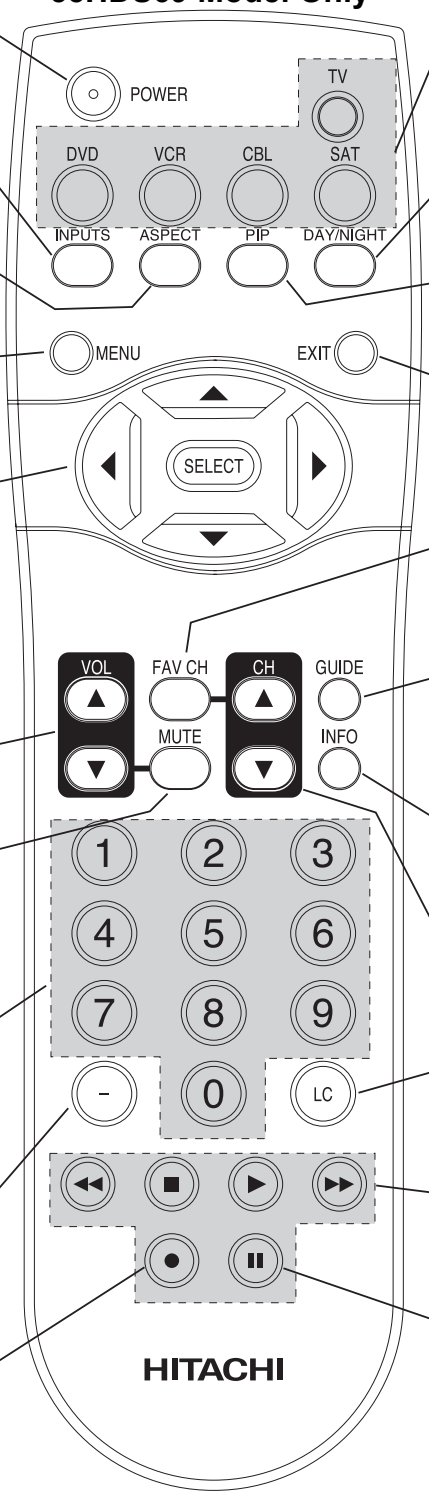
VOLUME BUTTONS (TV)
Adjusts the audio level of your TV.

MUTE BUTTON (TV)
Reduces the audio level to 50% if pressed once, and to complete mute if pressed twice. Press it a third time to restore audio level.

NUMERIC BUTTONS (TV, DVD, CBL, SAT, VCR)
Used to manually enter the TV channel, and used for numeric entry when navigating through the OSD menu system.

(-) BUTTON (TV, SAT)
The (-) button is used when the remote is in Set-Top-Box (STB) mode or when the TV uses a digital input.

RECORD BUTTON (VCR)
Press twice (2 times) to record programs.



SOURCE ACCESS BUTTONS (TV, DVD, VCR, CBL, SAT)
Changes the mode of the Universal Remote Control to control the device selected.

DAY/NIGHT BUTTON (TV)
Select picture mode settings between DAY and NIGHT mode.

PIP BUTTON (TV)
Press to show and change the Picture-in-Picture mode.

EXIT BUTTON (TV, CBL, SAT)
Exits out of the OSD or INPUTS menu systems if their menu is displayed.

FAVORITE CHANNEL (FAV CH) button (TV)
Press to enter/access Favorite Channel (FAV) mode.

GUIDE BUTTON (SAT, CBL)
Accesses the program guide of other devices.

INFO BUTTON (TV, CBL, SAT)
Displays various information on the screen.

CHANNEL BUTTONS (TV, CBL, SAT, VCR)
Changes the channel.

LAST CHANNEL (LC) BUTTON (TV, CBL, SAT)
Switches between the current and last channel viewed.

DVD/VCR CONTROL BUTTONS (DVD, VCR)
Controls the precode functions of your VCR and DVD.

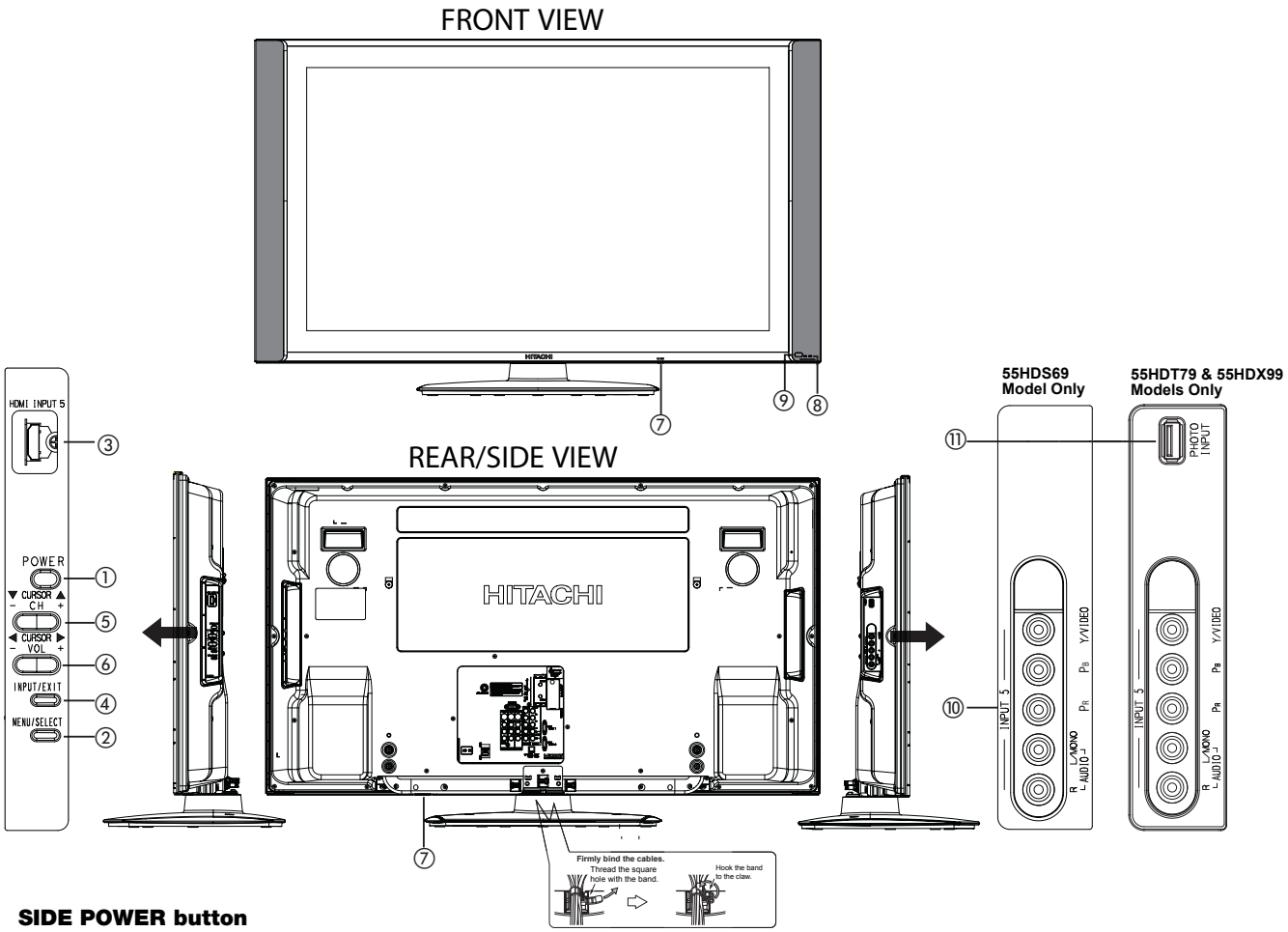
PAUSE BUTTON (TV, VCR, DVD)
Press to show and change the Freeze mode of the TV or pause other devices.

LEGEND

TV — Television
CBL — Cable Box
VCR — Video Cassette Recorder/Player
DVD — Digital Video Disc Player
SAT — Satellite Receiver

NOTES: *1. The TV's remote control sensor is located on the right bottom portion of the TV screen. To control TV functions, please point the remote control directly at the remote control sensor for best results.*

Front/Rear/Side Panel Controls



① **SIDE POWER button**
Press this button to turn the Plasma Television ON/OFF. It can also be turned ON/OFF by remote control. The "MAIN POWER" button must be at stand-by mode.

② **MENU/SELECT button**
This button allows you to enter the MENU, making it possible to set TV features to your preference without using the remote. This button also serves as the SELECT button when in MENU mode.

③ **SIDE HDMI INPUT (5)**
Use the side HDMI input for extrenal devices such as Set-Top-Boxes or DVD players equipped with an HDMI output connection (see page 16 for reference).

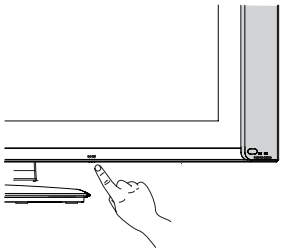
④ **INPUT/EXIT button**
Press this button to access the INPUT menu. Press again to exit the MENU mode.

⑤ **CHANNEL selector**
Press these buttons until the desired channel appears in the top right corner of the TV screen. These buttons also serve as the cursor down (▼) and up (▲) buttons when in MENU mode.

⑥ **VOLUME level**
Press these buttons to adjust the sound level. The volume level will be displayed on the TV screen. These buttons also serve as the cursor left (◀) and right (▶) buttons when in MENU mode.

NOTE: *The Rear View of the 55" model is slightly different from the 42" models. One of the differences are the handles that are only present on the 42" models.*

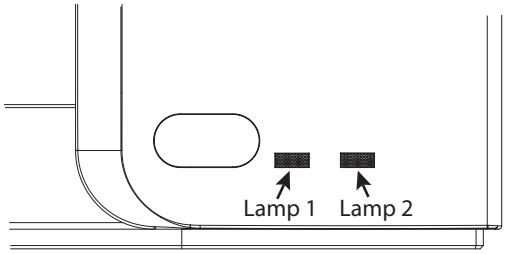
⑦ **POWER button**
Television MAIN POWER button
This power button is for the complete system, and must be turned ON/OFF manually. It is recommended to leave the "MAIN POWER" to ON condition (lights red) for stand-by mode.



The Main Power button is located on the broadside bottom, under the label "MAIN POWER".

NOTE: *When the "MAIN POWER" button is set to OFF or the TV is unplugged, the clock will stop and may eventually reset itself.*

⑧ **POWER light indicator**
To turn the TV ON, press the main power switch located on the lower right side of the TV. A red stand-by indicator lamp located on the lower right corner of the front bezel will illuminate. The Plasma TV is now ready for remote ON/OFF operation.



Indicating Lamp		Power Status	Operating
Lamp 1	Lamp 2		
Off	Off	OFF.	When the main power switch is set to Off.
Lights Red	Off	OFF. (Stand-by)	When the main power switch on the TV is ON.
Off	Blinking Blue	OFF. (Turning ON)	TV MAIN POWER is ON ; but no picture is shown.
Off	Lights Blue	On	TV MAIN POWER is ON ; picture is shown.
Lights Orange	Off	Off (Power Saving)	TV MAIN POWER is ON with no signal input except antenna (no sync. signal).

⑨ **REMOTE CONTROL sensor**
Point your remote at this area when selecting channels, adjusting volume, etc.
(Only HDT & HDX models)

⑨ **LEARNING AV NET sensor**
Point your equipment's remote control at this area while using the AV NET Learning Wizard.

⑩ **SIDE INPUT JACKS (for INPUT: 5)**
INPUT 5 provide Y-PBPR jacks for connecting equipment with this capability, such as a DVD player or Set Top Box. You may use composite video signal for both inputs.

⑪ **PHOTO INPUT**
Insert USB cable from your Digital Camera, USB memory or memory card USB drive to view your digital still pictures (see Owners Guide).
(Only HDT & HDX models)

NOTE: *1. Your component outputs may be labeled Y, B-Y, and R-Y. In this case, connect the components B-Y output to the TV's P_B input and the components R-Y output to the TV's P_R input.*
2. Your component outputs may be labeled Y-C_BC_R. In this case, connect the component C_B output to the TV's P_B input and the component C_R output to the TV's P_R input.
*3. It may be necessary to adjust **TINT** to obtain optimum picture quality when using the Y-P_BP_R inputs (see page 37).*
*4. **INPUT 3**, **INPUT 4** and INPUT 5 (Y/VIDEO) can be used for composite video and component video input.*

NOTES: *1. Your HITACHI Plasma TV will appear to be turned OFF (lights orange) if there is no video input when INPUT : 1, 2, 3, 4 and 5. Check the Power Light to make sure the TV is turned off or in Stand-by mode (lights red) when not in use.*
2. Remote Control can not turn ON/OFF the "MAIN POWER" of the TV.

REAR PANEL CONNECTIONS

① **Antenna Input**
The remote control allows you to switch between two separate 75-Ohm RF antenna inputs, CABLE and AIR. CABLE input can be displayed as a main picture or sub-picture. AIR can only be displayed as a main picture (AIR cannot be displayed as a sub-picture).

② **Audio/Video Inputs 1, 2, 3 and 4**
By using the INPUTS button, the CURSOR PAD (▲ and ▼), and the SELECT button or CURSOR PAD ▶ of the remote control, you can select each video source. Use the audio and video inputs to connect external devices, such as VCRs, camcorders, laserdisc players, DVD players etc. (if you have mono sound, insert the audio cable into the left audio jack).

③ **MONITOR OUT & HI-FI AUDIO OUT**
These jacks provide fixed and variable audio and video signals (CABLE/AIR, INPUT 1, 2 and 5) which are used for recording. Use the S-VIDEO Output for high quality video output. Component signal to Input 1 and 2, and HDMI inputs will not have monitor output.

④ **Optical Out (Digital Audio)**
This jack provides Digital Audio Output for your audio device that is Dolby® Digital and PCM compatible, such as an audio amplifier.

NOTE: **Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.*

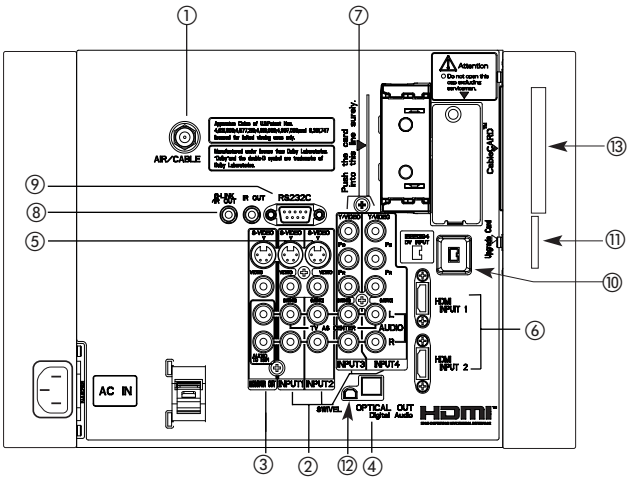
⑤ **S-VIDEO Inputs 1 and 2**
Inputs 1 and 2 provide S-VIDEO (Super Video) jacks for connecting equipment with S-VIDEO output capability.

NOTE:
1. *You may use VIDEO or S-VIDEO inputs to connect to INPUT 1 and 2, but only one of these inputs may be used at a time.*
2. *S-VIDEO output may be used for recording, only when the input is of S-VIDEO type.*

⑥ **HDMI1&2 (High Definition Multimedia Interface) (INPUT 1&2)**
ABOUT HDMI – **HDMI** is the next-generation all digital interface for consumer electronics. **HDMI** enables the secure distribution of uncompressed high-definition video and multi-channel audio in a single cable. Because digital television (DTV) signals remain in digital format, **HDMI** assures that pristine high-definition images retain the highest video quality from the source all the way to your television screen.

Use the **HDMI** input for your external devices such as Set-Top-Boxes or DVD players equipped with an **HDMI** output connection.

***HDMI**, the **HDMI** logo and High-Definition Multimedia Interface are trademarks or registered trademarks of **HDMI** Licensing LLC.*



NOTE:
1. *The **HDMI** input is not intended for use with personal computers.*
2. *Only DTV formats such as **1080I, 720P, 480I** and **480P** are available for **HDMI** input.*

⑦ **Component: Y-PBPR Inputs**
INPUTS 3 and **4** provide Y-PBPR jacks for connecting equipment with this capability, such as a DVD player or Set Top Box. You may use composite video signal for both inputs.

NOTE:
1. *Do not connect composite **VIDEO** and **S-VIDEO** to **INPUT 1 or 2** at the same time. **S-VIDEO** has priority over **VIDEO** input.*
2. *Your component outputs may be labeled Y, B-Y, and R-Y. In this case, connect the components B-Y output to the TV's PB input and the components R-Y output to the TV's PR input.*
3. *Your component outputs may be labeled Y-CBCR. In this case, connect the component CB output to the TV's PB input and the component CR output to the TV's PR input.*
4. *It may be necessary to adjust **TINT** to obtain optimum picture quality when using the Y-PBPR inputs (see page **Owners Guide**).*
5. *To ensure no copyright infringement, the **MONITOR OUT** output will be abnormal, when using the Y-PBPR jacks and HDMI Input.*
6. ***INPUT 3** , **4** and **5** (Y/VIDEO) can be used for composite video and component video input.*

⑧ **IR Blaster**
This jack provides IR output to your external components (VCR, Cable box, DVD player, etc.). With this connection, your external components can automatically be controlled by the A/V network feature. This connection will allow you to control the external components with your Plasma Television's remote control in TV mode.
(Only HDT & HDX models)

⑨ **For Service Use Only**
Do not connect anything to this terminal.
Specifically for Service use only.

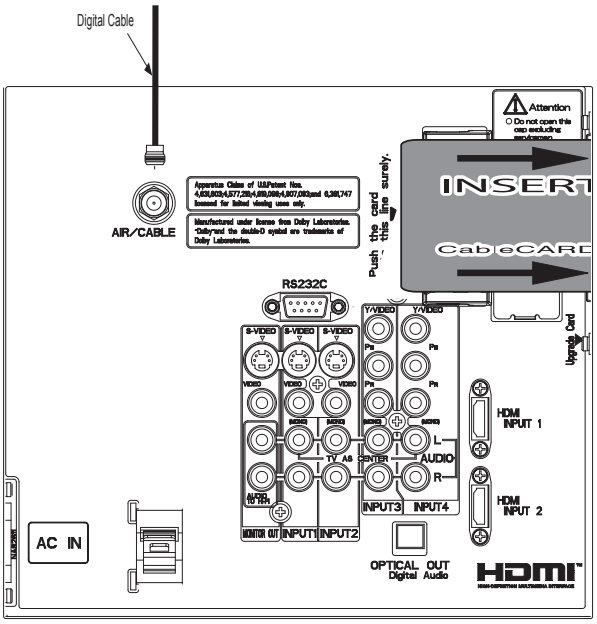
⑩ **IEEE1394 (DV INPUT)**
These jacks provide a digital interface for your external digital devices, such as a Digital VCR (D-VHS), Set-Top-Box or Digital Camcorder by means of a single cable (see page 19). When using IEEE1394 connections, you enable video and audio digital data exchange between a compatible device. This connection also enables you to control basic equipment functions (such as VCR play, rewind, fast forward, stop, etc.) from your TV On-Screen Display.(Only HDT & HDX models)

⑪ **Upgrade Card**
This card slot is for future software upgrades. Hitachi will notify you if a software upgrade is required for your TV. In order to receive written notification, please complete and return your warranty card.

⑫ **To Power Swivel Connector**
Connects to the Power Swivel Table Top Stand. (Only HDT & HDX models)

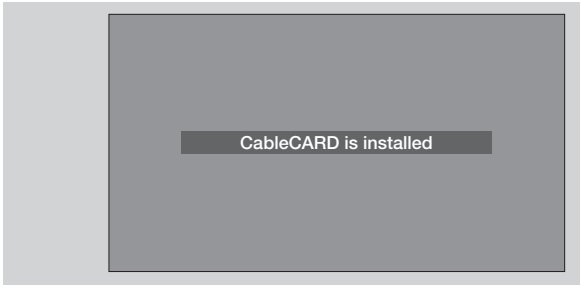
⑬ **CableCARD Slot**
This slot is for the CableCARD that will be provided by your local cable operator to gain access to chosen cable channels. The CableCARD will allow you to tune digital and high definition cable channels. Please call your local cable operator if this service is available before requesting a CableCARD (also known as Point of Deployment (POD) module).

1. Connect a coaxial cable to cable terminal of the Rear Panel Jacks.
2. Insert the CableCARD into the slot (Top of card should be facing towards you as shown below).

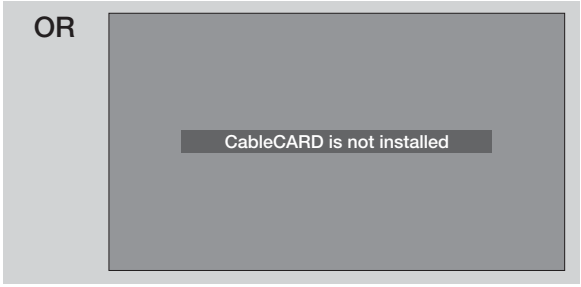


NOTE: *1. A digital cable subscription is required.*
2. Do not insert a PCMCIA card into the CableCARD slot.

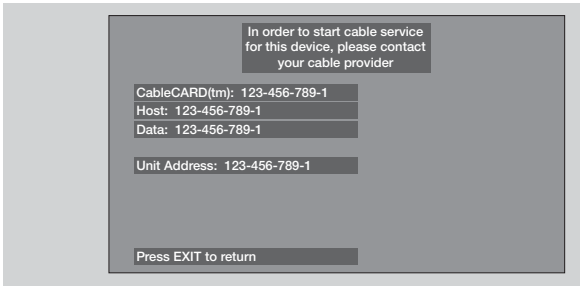
If the CableCARD is properly installed or removed, the TV will display the following respective screens.



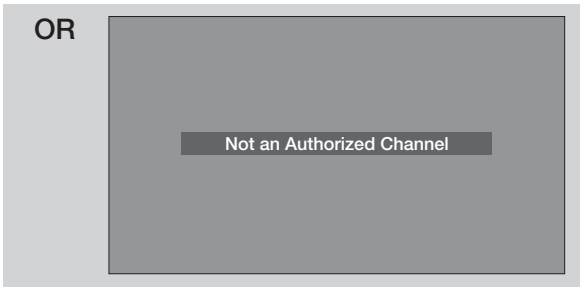
OR



After the CableCARD is installed, wait until the second screen below appears. The third screen below will appear if a channel is not authorized for viewing. Press the **EXIT** button to exit the second screen.



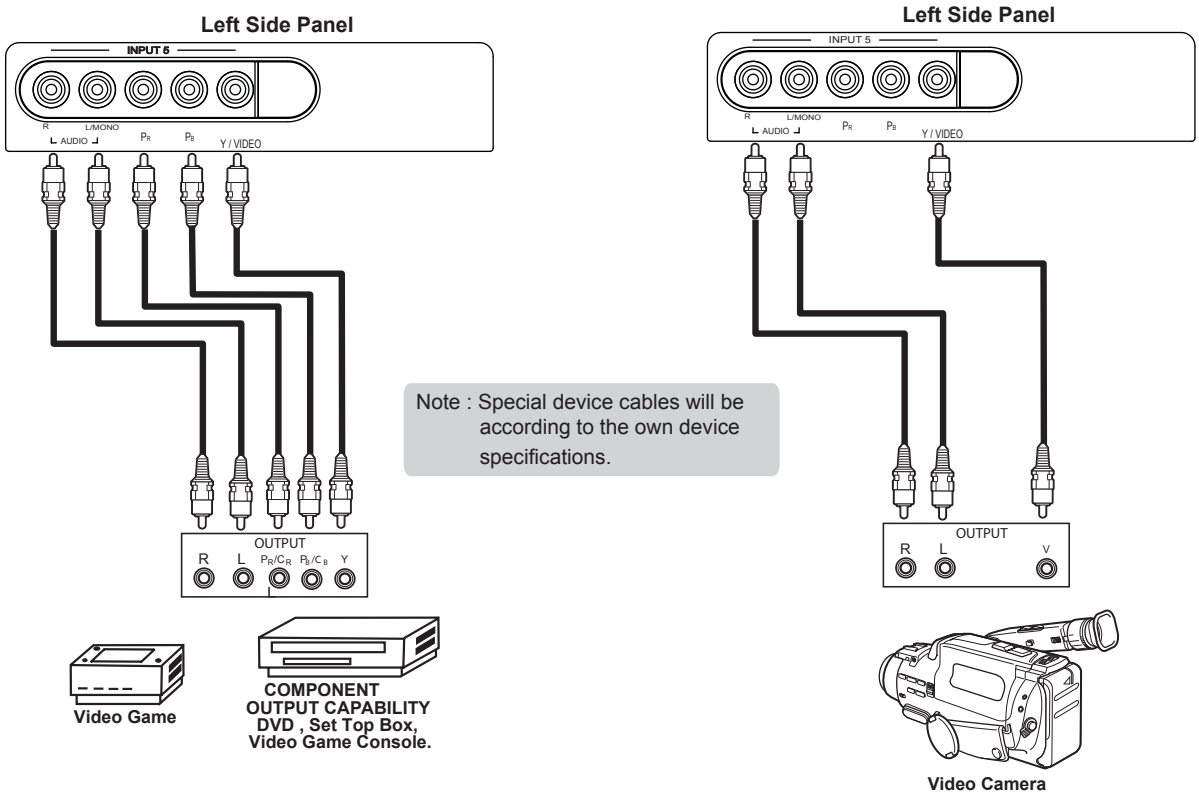
OR



Please take note of all information on the screen (you will provide this information to your cable operator). Call your cable operator and give them the information from the card to start your cable service.

Connecting External Video Sources

The LEFT SIDE panel jacks are provided as a convenience to allow you to easily connect a camcorder , DVD, Video Game or VCR as shown in the following examples:



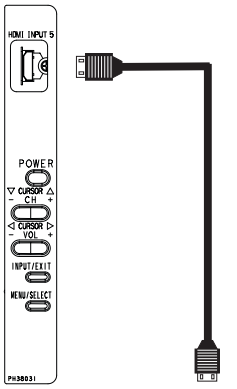
NOTE: *1. Completely insert connection cord plugs when connecting to left side panel jacks. If you do not, the played back picture may be abnormal.*

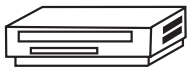
Connecting External Video Sources

The RIGHT SIDE panel jacks are provided as a convenience to allow you to easily connect HDMI or DVI signals from a DVD, Set Top Box , Video Game as shown in the following examples (When connecting DVI signal it will need to connect the audio output into the Left Side Input jacks) :

A) Connecting HDMI signal.

Right Side Panel



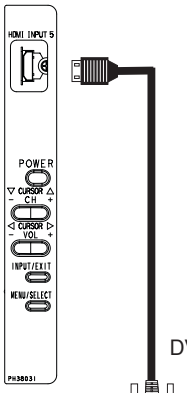


HDMI DIGITAL OUTPUT CAPABILITY DVD , Set Top Box, Video Game Console.

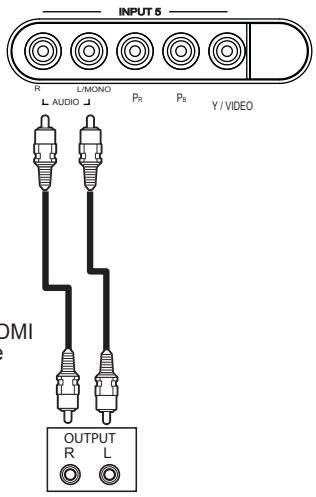
Note : Special device cables will be according to the own device specifications.

B) Connecting DVI signal.

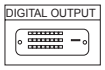
Right Side Panel

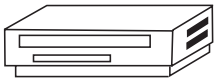


Left Side Panel



DVI to HDMI Cable





Back of HDTV Set-Top-Box or DVD Player

DVI DIGITAL OUTPUT CAPABILITY DVD , Set Top Box, Video Game Console.

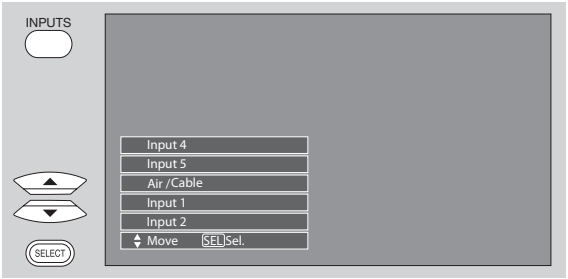
NOTE: *1. Completely insert connection cord plugs when connecting to side panel jacks. If you do not, the played back picture may be abnormal.*

The exact arrangement you use to connect the VCR, camcorder, laserdisc player, DVD player, or HDTV Set Top Box to your Plasma TV is dependent on the model and features of each component. Check the owner's manual of each component for the location of video and audio inputs and outputs.

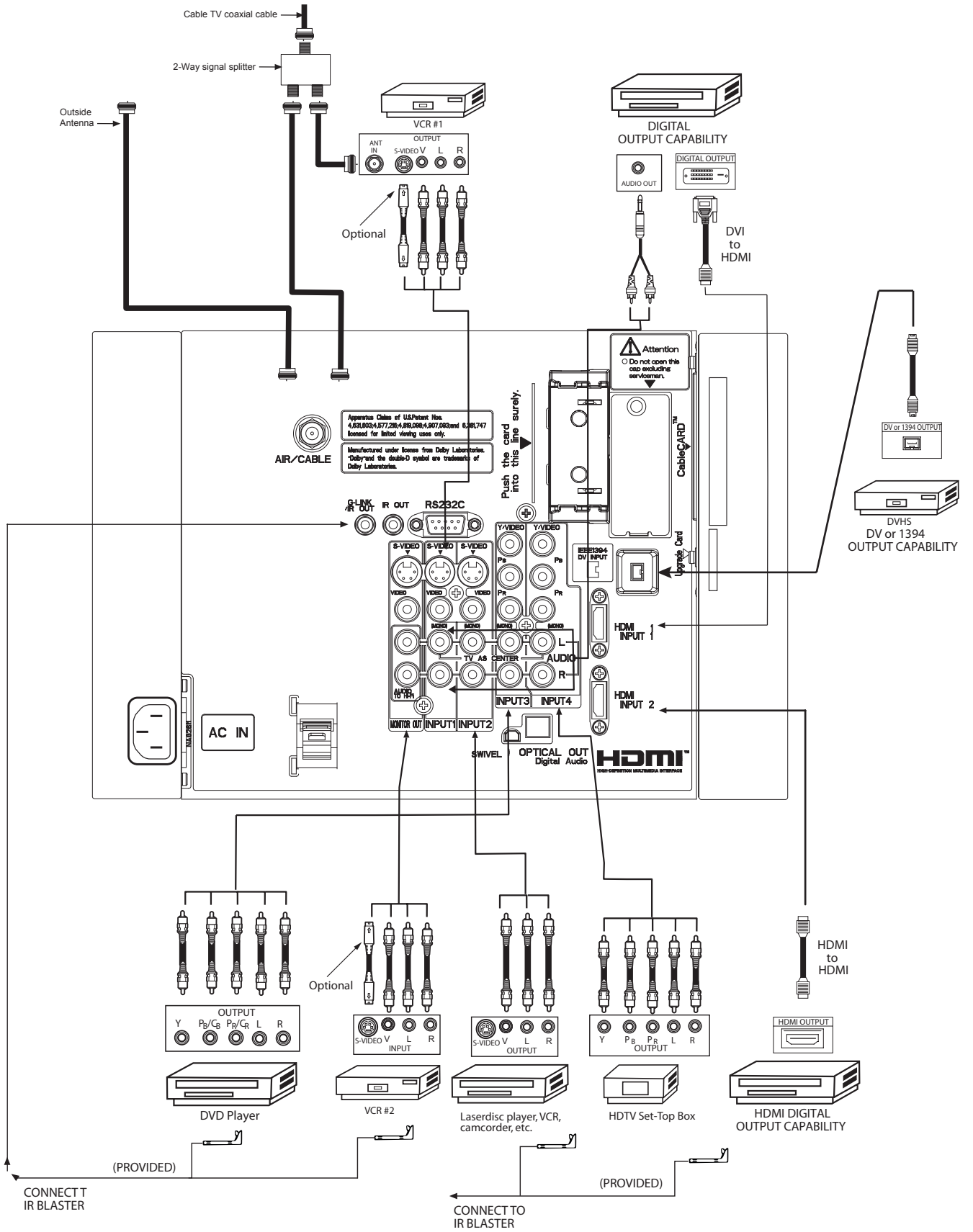
The following connection diagrams are offered as suggestions. However, you may need to modify them to accommodate your particular assortment of components and features. For best performance, video and audio cables should be made from coaxial shielded wire.

Before Operating External Video Source

Connect an external source to one of the INPUT terminals, then press the INPUTS button to show the INPUTS menu. Use the CURSOR PAD (▲ and ▼) to select the Antenna or Input of your choice. Then press the SELECT button or the CURSOR PAD ▶ to confirm your choice (see page 26).



CONNECTING EXTERNAL VIDEO SOURCES



NOTE: Cables are optional, except when specified.

- S-VIDEO, Y-P_BP_R, or HDMI connections are provided for high performance laserdisc players, VCRs etc. that have this feature. Use these connections in place of the standard video connection if your device has this feature.
- If your device has only one audio output (mono sound), connect it to the left audio jack on (L/(MONO)) the Rear Panel.
- Refer to the operating guide of your other electronic equipment for additional information on connecting your hook-up cables.
- A single VCR can be used for VCR #1 and VCR #2, but note that a VCR cannot record its own video or line output (INPUT: 1 in the example on page 14). Refer to your VCR operating guide for more information on line input-output connections.
- Connect only 1 component (VCR, DVD player, camcorder, etc.) to each input jack.
- COMPONENT: Y-P_BP_R (Input 3, 4 & 5) connections are provided for high performance components, such as DVD players and set-top-boxes. Use these connections in place of the standard video connection if your device has this feature.
- Your component outputs may be labeled Y, B-Y, and R-Y. In this case, connect the components B-Y output to the TV's P_B input and the components R-Y output to the TV's P_R input.
- Your component outputs may be labeled Y-C_BC_R. In this case, connect the components C_B output to the TV's P_B input and the components C_R output to the TV's P_R input.
- It may be necessary to adjust TINT to obtain optimum picture quality when using the Y-P_BP_R inputs. (See page 37)
- To ensure no copyright infringement, the MONITOR OUT output will be abnormal, when using the Y-P_BP_R, and HDMI input jacks.
- Input 1 , 2 or 5 can accept HDMI signal.
- S-VIDEO monitor output may be used for recording only when the input is of S-VIDEO type.
- When using a HDMI input from a Set-Top-Box, it is recommended to use a 1080i or 720p input signal.

INSTALLATION RECOMMENDATION:

1. Video signals fed through a VCR may be affected by copyright protection systems and the picture will be distorted on the television.
2. Connecting the television directly to the Audio /Video output of a Set-Top-Box will assure a more normal picture.

IMPORTANT NOTES

No.	Items	Notes
1	Arching sound from plasma display monitor's panel.	A buzzing sound might be heard when the plasma display monitor is turned on in a very quiet room. This is due to the plasma panel drive circuit when it is functioning. This arching sound is normal and it is not a malfunction.
2	Interference for infrared equipment.	Some infrared rays are emitted from the plasma display monitor's panel that might affect other infrared controlling equipment.
3	Bright and dark spots	High-precision technology is used to manufacture the plasma display panel; But in some cases, there are minor defects in some parts of the screen. Points that do not light, points with brightness different from that of the periphery, points with color different from that of the periphery, etc. Some pixels will always be on or always off. Please note that this is not a malfunction.
4	Picture Image (Spectrum)	When receving still picture signals, (e.g. channel number indication or clock indication) for a while, you can see image-like when the picture varied. This is not a defect.
5	Display panel surface temperature is too high	The plasma display panel is lighting the phosphors by the discharge of internal radiation. In some cases, this may cause the temperature of the panel surface to increase. Please note that this is not a malfunction. The Plasma TV surface temperature is higher than a Cathode-ray-tube.
6	Plasma Surface	The plasma panel is made from glass. Heavy shock on the front panel might damage it.
7	Transportation	When the PDP monitor is transported horizontally, the glass panel has the possibility of being broken or increasing the picture defects. At the time of transportation, horizontal style is prohibited. More-over, please treat the plasma panel with great care because of a precision apparatus. Please instruct transporters so that it should be put into the packing box at the time of shipment.(There is a possibility that breakage of the panel or defects will increase.) Rough transportation might cause damage to the panel and pixel failure.
8	Image retention	The plasma monitor illuminates phosphor to display images. The phosphor has a finite illumination life. After extended periods of illumination, the brightness of the phosphor will be degraded to such extent that stationary images would burn-in that part of the screen as grayed-out images. Tips to prevent such image retention are: - Do not display images having sharp brightness differences or hi-contrast images, such as monochrome characters and graphic patterns, for long. - Do not leave stationary images appearing for long, but try to refresh them at appropriate intervals of time, or try to move them using screen saver function. - Turn down the contrast and brightness controls.
9	Luminosity and contrast	PDP television has luminosity and low contrast compared with CRT television.
10	Granular spots	When a screen is seen at point-blank range, a random fine grain may be visible to a dark part.
11	Disturbance to video apparatus	If an apparatus (VCR, etc.) antenna line is arranged near the monitor, the image may shake, or disturbance may be received.
12	Lip Sync	There is some time lag betweeen the picture and the sound. You can see lip motion that is delayed compared to the sound.
13	About the use environment of PDP television (temperature)	Electric discharge/luminescence characteristic of the PDP panel also changes with peripheral temperature. Moreover, since there is also high power consumption value, a specified temperature environment is required.
14	Caution on prolonged storage	Storing the plasma television for a period of more than 2 to 3 months without use might cause an unstable picture when the set is turned on.
15	Operating	Operating altitude: 800 to 1114hPa (6194ft to -2484ft). Operating temperature: 41˚F to 95˚F.
16	Storage	Storage Altitude: 300 to 1114hPa (31,912 to -2484ft). Storage temperature: 5˚F to 140˚F.
17	Power ON or OFF	Frequent use of the Power ON or OFF might trigger the power protection circuit. If the TV does not turn ON, please wait a little before turning ON again.

ADJUSTMENTS TABLE OF CONTENTS

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1 ADJUSTMENT PROCEDURE START-UP

The 55HDT79, 55HDS69 and 55HDX99 PDP TV sets pass through adjustment procedures during the assembly process. These adjustments must be done to assure the best performance of the PDP set for the consumer.

Also, after servicing, these same adjustments must be done. The adjustments are all made through the I²C bus by changing data in the Adjustment mode menu.

Table 2 on pages 38-46 shows the complete parameter list with a brief description, signal format, the adjustment range and the initial data.

1.1 HOW TO GET TO ADJUSTMENT MODE

Chassis adjustment mode can be access by pressing the R/C keys MENU + MENU + 8 + SELECT to enter adjustment mode. For some parameters the only way to see them is by selecting the parameter number than pressed SELECT in order to see it; then DATA can be change if other parameter needs to change then press ▼ key then repeat the same procedure.

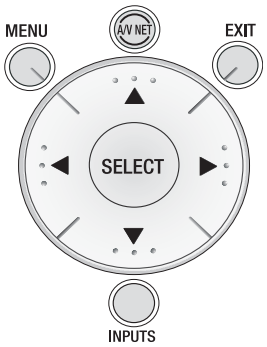
ADJUST MODE
FACT RESET
MEMORY INIT
RGB
WHITE BAL HIGH
WHITE BAL MED
WHITE BAL STD
WHITE BAL B/W

Other way to access this mode is by use JIG R/C code: (9C Hex). To escape from Adjustment Mode press “INPUT” key on Side panel or EXIT key of R/C to exit service adjustment mode.

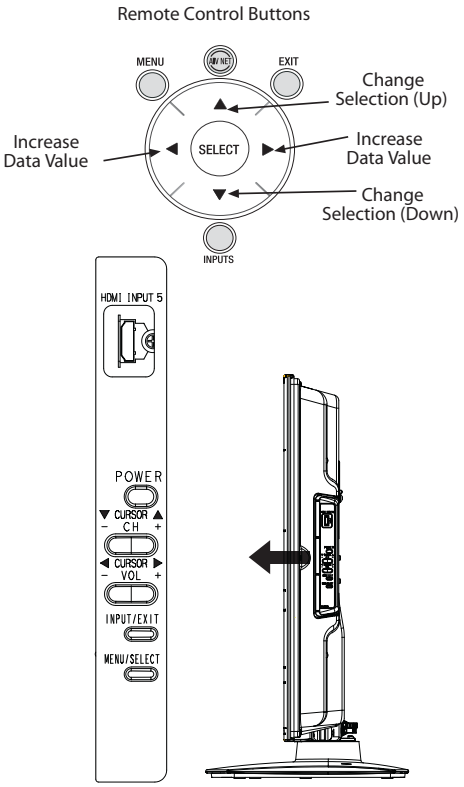
1.2 CHANGING DATA AND SELECTING ADJUSTMENT CODE

When the PDP set is in adjustment mode, the cursor ◄, ►, ▲, ▼ and MENU keys of the remote control or front panel may be used as the adjustment keys.

A. Use any Hitachi remote control when making an adjustment.
▲, ▼ keys are used for selecting adjustment item.



◄, ► keys are used for changing data values.
MENU key is used to advance through the adjustment mode menus and pages.



B. To make a selection, use the NUMBER pad on the PDP R/C ; example : select DEVICE press 69 then SELECT the DATA shown is "EB" ; if this DATA needs to be change press the ◄, ►, keys to modify, when finish press SELECT key to store the new DATA value.
normal condition.

C. After finishing the necessary adjustment press the R/C EXIT key or EXIT key on the side panel.
Adjustment mode is released and PDP set returns to normal condition.

2 MEMORY INITIALIZE

2.1 MEMORY INITIALIZE OPERATION

NOTE: The execution of this function returns the adjustment codes to the preset values, therefore, **adjustment data will be lost**.

Procedure

(1) Enter Adjustment mode by the method described in sub-items 1.1 and 1.2 from item 1 (“Adjustment procedure start up”).
(2) Get to the second page of Adjust Mode by pressing remote control “Menu” key once, or with either the R/C or front panel ▲, ▼ cursor keys several times.
(3) Select MEMORY INIT adjust code.
(4) Activate MEMORY INIT by pressing ► cursor key for more than 3 seconds.
(5) Check the following process for initialization operation.

BACK TO ADJUSTMENTS

·Process of Memory Initialize operation.

① A screen is be colored **cyan** when MEMORY INIT start.

② A screen is be colored **green** when MEMORY INIT finish normally.

③ A screen is be colored **red** when MEMORY INIT finish abnormally.

(6) Do not unplug from AC outlet until this operation is complete and do not perform any key operation either, after this operation each factory setting and all adjust mode data should reset to delivery settings automatically.

(7) After Memory Initialize, it should be unplug AC cord. Unplug and plug AC cord and then all settings and data are updated.

(8) When PDP turns ON , it will tune CH03 this is the complete operation of Memory Initialize process.

2.2 FACTORY AND SERVICE ADJUSTMENTS

The adjustment item that is affected by the memory initialize operation is shown below:

*** JIG. R/C FACTORY PRESET CODE:92**

MEMORY INITIALIZE and FACTORY PRESET

ITEM	MEMORY INITIALIZE	FACTORY RESET	REMARKS
RGB(480p) ADJUST DATA	NOT INITIALIZE	NOT INITIALIZE	
WHITE BALANCE SETTING	NOT INITIALIZE	NOT INITIALIZE	
OTHER ADJUSTMENT MODE DATA	INITIALIZE	NOT INITIALIZE	
FACTORY RESET ITEM	INITIALIZE	INITIALIZE	
CHANNEL LIST	INITIALIZE	INITIALIZE	

Note: Perform pre heat-run for more than 20 min. before adjusting.

3.1 Sub-Contrast & Clamp Offset Adjustment

Preparation for adjustment

(1) Pre-heat at least 2 min. before the Final Adjust.

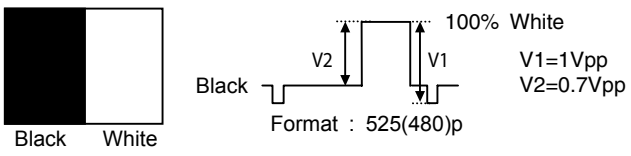
(2) Recall user menu and select 'Video'→ 'Picture Mode'→ 'Day(Dynamic)'→ 'Reset'.

(3) Receive following signal into input3 or input4(Comp) input.

Adjustment procedure

3.11 525p Sub-Contrast, Y/Cb/Cr Clamp offset adjustment

(1) Receive following 525(480)p Signal.



Adjustment signal for 525(480)p format

(2) Go into Service Adj. Menu and select 'RGB' .

(3) Press ▶ for over 2 seconds and have it perform automatic adjustment. When it's completed, 'Auto Adjusting' on the screen will be disappeared.

3.12 525i Cb,Cr Clamp offset adjustment

Preparation

(1) Change signal format from 525(480)p to 525(480)i. (See Fig.2)

Adjustment

(1) Select 'RGB' of Service Adj. Menu. Press ▶ for over 2 seconds and have it perform automatic adjustment. When it's completed, 'Auto Adjusting' on the screen will be disappeared.

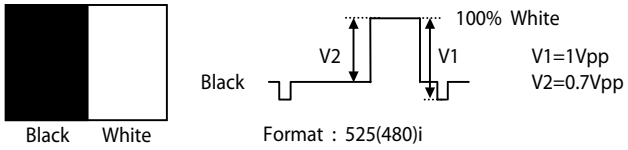


Fig.2 Adjustment signal for 525(480)i format

3.2 BRIGHTNESS CHECK

Preparation

(1) Start checking 20 minutes or more after the power is turned ON.

(2) Receive the color bar signal.

(3) The vertical incident illumination on the screen should be 20 lux or less.

(4) Picture Format is 16:9 standard mode.

(5) Select Day mode and reset.

Checking Procedure

(1) Check the brightness as below.

	DW-2
Can be seen at black	A1*
Can be seen slightly from black	A2*

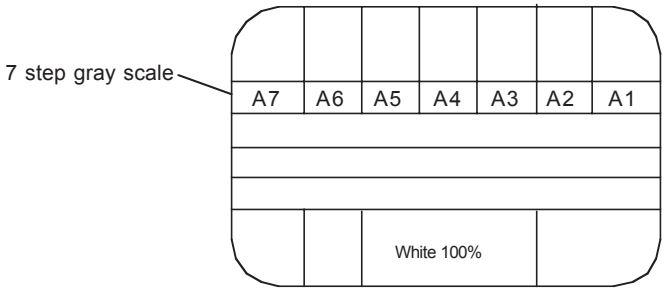
Note: If set black level is NG, readjust item Sub Contrast adj.

Measuring Conditions

(1) At the signal electric field strength 75± dBm, the specification mentioned above should be satisfied.

(2) At the input electric field 46-106dB , there should be no abnormality.

* From color bar pattern below.



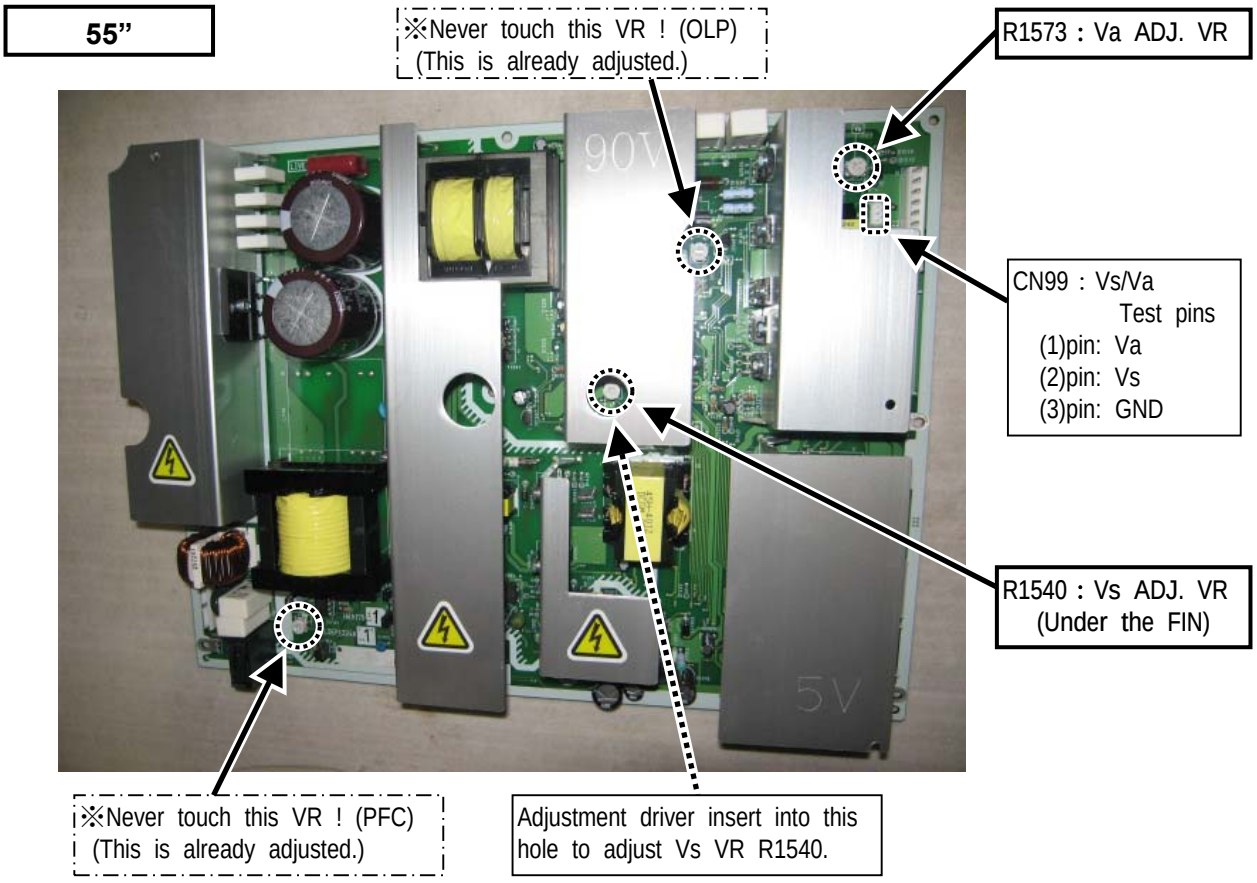
Color Bar Signal

A4 has tolerance.
A4 can be between black and Slightly from black.

BACK TO ADJUSTMENTS

4. Vs, Va voltage adjustment

Item	Power Unit Vs, Va Adjustment			Adj. point	Refer to following
Adjustment Preparations		Adjustment Procedures		Remarks	
(1)	Turn on the set and perform pre-heat run more than 1 min on burn-in screen.	(1)	Turn Vs ADJ to adjust Vs voltage to be within ±0.1V of the value specified in the label on the panel.	Permissive level of voltage in sufficient time of heat-run performed is: Vs: within±0.1V	
(2)	Receive full black pattern signal (or video silence signal; but the power will be automatically turned off after a few seconds by power save function.)	(2)	Turn Va ADJ to adjust Va voltage to be within ±0.2V of the value specified in the label on the panel.	Va: within±0.2V 42'': Adjusted by manufacturing. 55'': Need to be adjusted.	
(3)	Connect voltmeter (which has an error within 0.02V or less) leads to Vs (or Va) and GND test points of the power unit.	(3)	Reconfirm that Vs voltage remains within ±0.1V of the specified value. Readjust if it's outside of the margin. [Label example] <LOT>N6 Vs= 80.0V Va=60.0V Vw=140.0V Vx=60.0V	Label position (Reference) : Upper left If it's hard to read the voltage value because of the wiring positions, write it down by a marker at visible place in advance.	



BACK TO ADJUSTMENTS

5 WHITE BALANCE ADJUSTMENTS

General Notes for White Balance

(1) If the incident illumination is more than 20 lux, change the environment (location, lighting, etc.) and ensure it to be less than 20 lux.
(2) At least one of the color drive codes must stay at its maximum value, FF_H.

5.1 VIDEO COLOR TEMPERATURE ADJUSTMENT (HIGH)

Preparation 1

(1) Set the output of signal generator to white raster. (Ratio:100%)
(2) Component signal

	42”	55”
Video level:	0.700Vp-p	0.280Vp-p
SYNC:	0.300Vp-p	0.286Vp-p
Set-up level:	0V	0V

(3) Input white raster signal into COMPONENT input terminal of the PDP set.
(4) Set user control to Day mode. (Picture Mode)
(5) Confirm that the mode is set as “Factory Setting Mode”.
(6) Aspect: ① Video: Expanded
②

Adjustment

(1) Perform the following adjustment with the remote control.
(2) Set the CRT color analyzer (CA-100) at the center of the panel.
(3) Set color temperature to “HIGH”.
(4) Ensure that Adjustment R/G/B DRIVE (HIGH) are all set as FF.
(5) After receiving White raster signal, step down the two (or one) among Adjustment R/G/B DRIVE (HIGH) and adjust the value shown in the following:

Specification Video Color temperature (HIGH)
42" x = 0.273 ± 0.005 y = 0.273 ± 0.005 (Color temp: 12000K)
55" x = 0.273 ± 0.005 y = 0.273 ± 0.005 (Color temp: 12000K)

At least one of the data should be FF.

Remarks

(1) Color temperature should be adjusted under the condition in which the screen is the brightest, thus the initial value for adjustment is set to its maximum.
(2) Adjustment is made by reducing brightness only. Reduce a bright color for adjustment.
(3) Video color temperature & Adjustment No. are the same, but addresses in the memory are different, thus there’s no problem.

5.2 VIDEO COLOR TEMPERATURE ADJUSTMENT (MEDIUM)

Preparation

(1) Same as “Video Color Temperature adjustment: (HIGH)”. For 55” the video level changes to 0.700Vp-p.

Adjustment

(1) Perform the following adjustment with the remote control.
(2) Set the CRT color analyzer (CA-100) at the center of the panel.
(3) Set color temperature to “MEDIUM”, using SEL key.
(4) Ensure that Adjustment R/G/B DRIVE (MEDIUM) are all set as FF.
(5) After receiving White raster signal, step down the two (or one) among Adjustment R/B/G DRIVE (MEDIUM) and adjust the value shown below.

Specification Video Color temperature (MED)
42" x = 0.285 ± 0.005 y = 0.293 ± 0.005 (Color temp: 9300K)
55" x = 0.285 ± 0.005 y = 0.293 ± 0.005 (Color temp: 9300K)

At least one of the data should be FF.

BACK TO ADJUSTMENTS

5.3 VIDEO COLOR TEMPERATURE ADJUSTMENT (STD)

Preparation

(1) Same as "Video Color Temperature adjustment: (HIGH)". For 55" video level changes to 0.700Vp-p.

Adjustment

(1) Perform the following adjustment with the remote control.
(2) Set the CRT color analyzer (CA-100) at the center of the panel.
(3) Set color temperature to "STD".
(4) Ensure that Adjustment R/G/B DRIVE (STD) are all set as FF.
(5) After receiving White raster signal, step down the two (or one) among Adjustment R/B/G DRIVE (STD) and adjust the value shown below.

Specification
Video Color temperature (STD)
42"
x = 0.314 ± 0.005
y = 0.327 ± 0.005
(Color temp: 6500K)
55"
x = 0.314 ± 0.005
y = 0.327 ± 0.005
(Color temp: 6500K)

At least one of the data should be FF.

5.4 VIDEO COLOR TEMPERATURE ADJUSTMENT (B/W) (Only for HDX models)

Preparation

(1) Same as "Video Color Temperature adjustment: (HIGH)". For 55" video level changes to 0.700Vp-p.

Adjustment

(1) Perform the following adjustment with the remote control.
(2) Set the CRT color analyzer (CA-100) at the center of the panel.
(3) Ensure that Adjustment R/G/B DRIVE (B/W) are all set as FF.
(4) After receiving White Raster signal, step down the two (or one) among Adjustment R/B/G DRIVE (B/W) and adjust the value shown below.

Specification
Video Color temperature (B/W)
42"
x = 0.335 ± 0.005
y = 0.343 ± 0.005
(Color temp: 5400K)
55"
x = 0.335 ± 0.005
y = 0.343 ± 0.005
(Color temp: 5400K)

At least one of the data should be FF.

Remarks

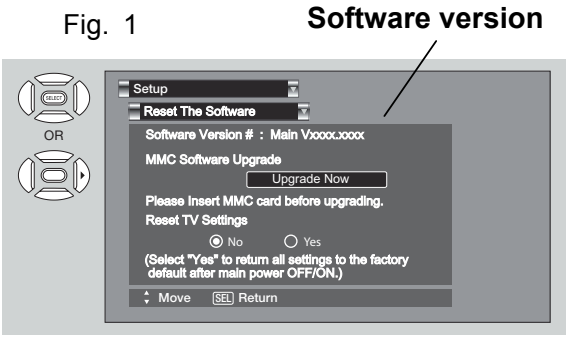
(1) Same as "Video Color Temperature adjustment (HIGH)"

6. DIGITAL MAIN CHECK

6.1 SYSTEM SOFTWARE VERSION CHECK

(1) Press Menu button on the R/C or control panel.
(2) Enter the SETUP options, and then look for UPGRADES option.
(3) The Main software version will be display V0100.0000 as shown on Fig. 1.
(4) If this version needs to be change for a design improvement or failure, please select the Upgrade Now button.

Fig. 1



(5) The upgrading process begin by filling a bar, when finish the message will say, "Upgrade complete …" when this appear unplug the TV from the AC line outlet to complete the process.
(6) Now plug again the TV and verify the new software version.
(7) The Main software version will display the latest version issue by design.

NOTE:

(1) A Service Bulletin will be sent when a new version is issued officially to the Service Department every time the software version needs to be modified.
(2) In case that the upgrade fails or when a CARD is inserted with new version and can't upgrade ; please perform the **FACTORY RESET** process to the TV, then try upgrading again.

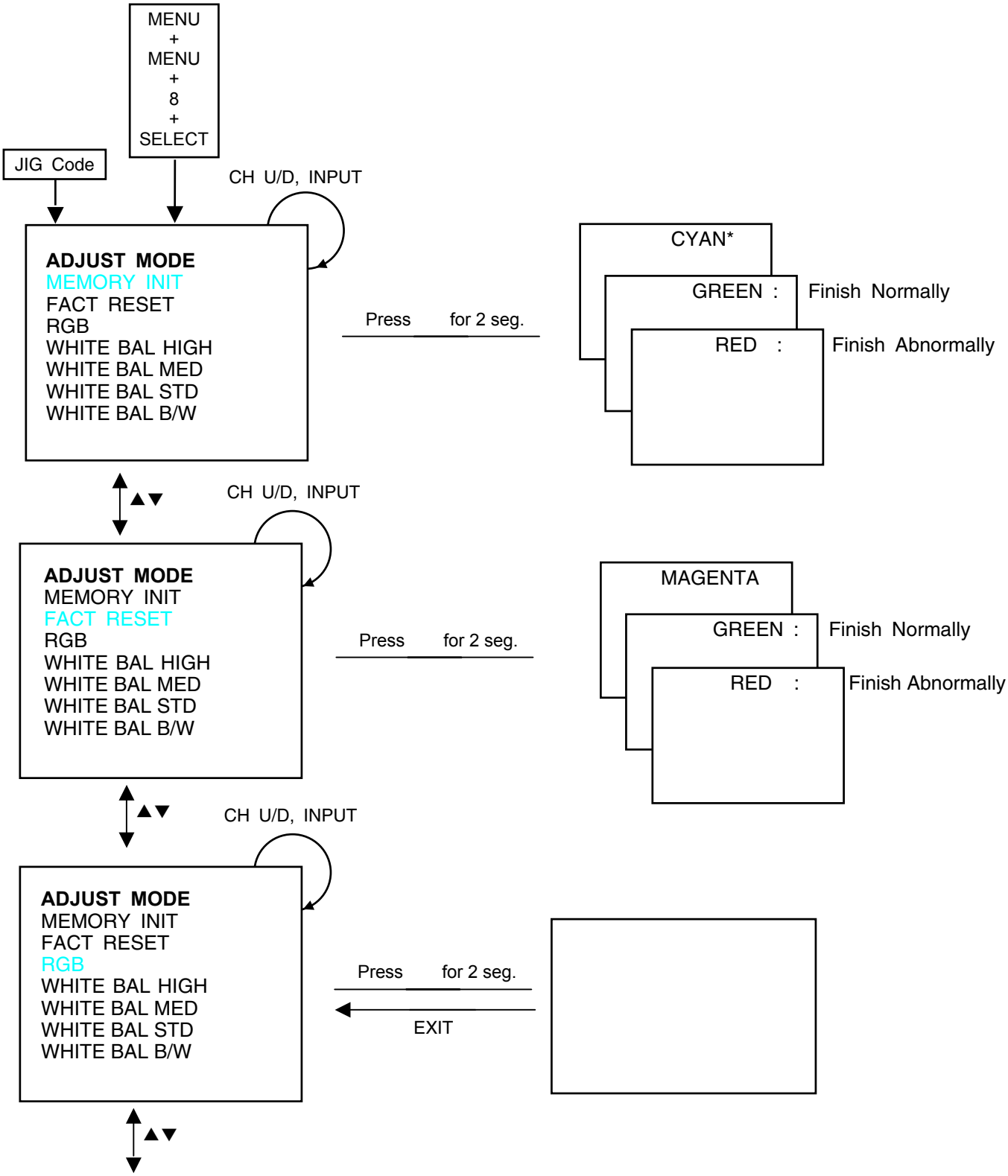
BACK TO ADJUSTMENTS

5.5 WHITE BALANCE ADJUSTMENT OSD FLOW DIAGRAM

5.5.1 Adjustment OSD Flowchart

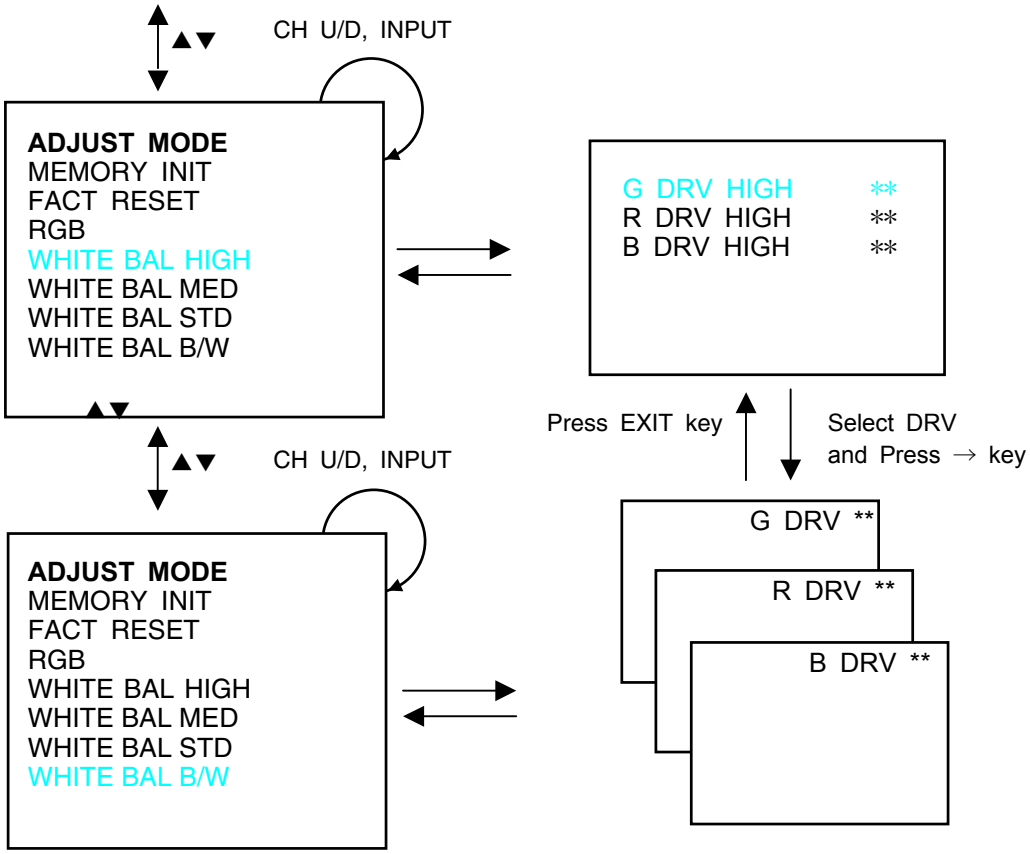
(1) Adjust Mode OSD

JIG R/C code:9C or Press [MENU]+[MENU]+[8]+[SELECT] of Control panel.



BACK TO ADJUSTMENTS

5.7.1 Adjustment OSD Flowchart (Cont.)



WHITE BALANCE
ADJUST MODE

VIDEO SETTINGS
(1) CONTRAST ; MAX
(2) COLOR,TINT,SHARP,BRIGHT ; CENTER
(3) COLOR TEMP ; HIGH

ADJUST
(1) Press ↑ ↓ to Select the G DRV,R DRV, B DRV.
(Initial value R/G/B DRV : FF)

(2) Press ← →to adjust

BACK TO ADJUSTMENTS

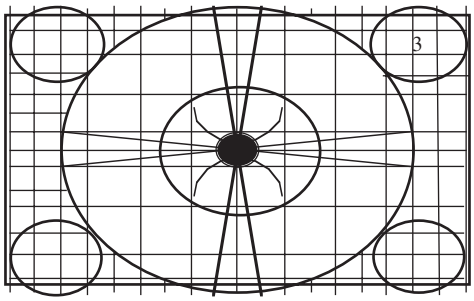
7. SCREEN CHECK

Preparation

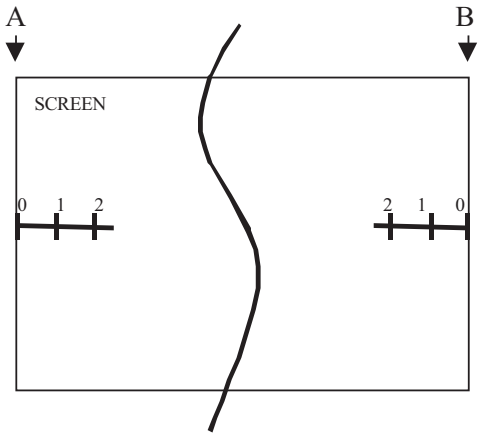
(1) Set AC120±1V.
(2) Turn on the power and leave it more than 5 min.
(3) Receive circle pattern at 4:3 Expanded mode.
(4) Input 480p and 1080i circle pattern into Component video 3. (ASPECT 16:9 Standard)

Checking

(1) Receive RF, 480p and 1080i signal, then check the following items 1~4:
1. Check the symmetry of the pattern (right/left).
2. Check the horizontal position and the balance (right/left).
3. Check the symmetry of the pattern (top/bottom).
4. Check the vertical position and the balance (top/bottom).



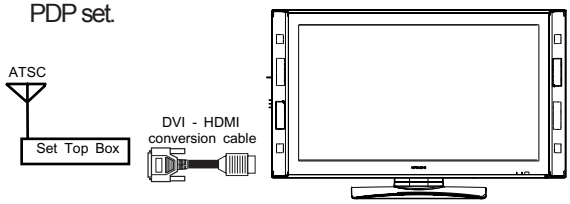
Remarks



SIGNAL	ASPECT	SPEC(A,B)
Hitachi circle pattern	16:9 Standard1	0 +/- 0.5

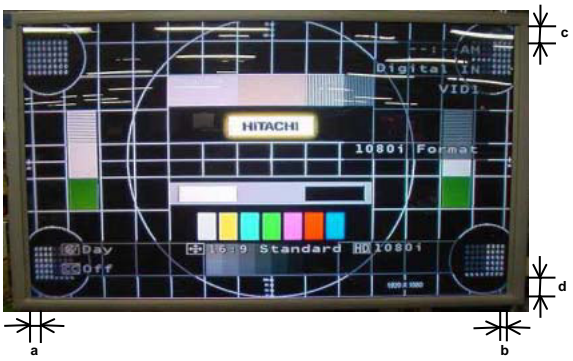
8. HDMI adjustment

a. DVI compatibility check
Preparation
1. Prepare HDTV signal generator. (Zenith HD-SAT520)
2. Select DVI mode then 1080i format
3. Connect HDMI-DVI cable to the HDMI input on the PDP set.



b. DVI/HDCP/Timing (Display Position) Check
1. Set 1080i crosshatch with black background, with a small color bar and small multi-burst. (Confirm that the picture appears as shown below or similar)
2. Press “INFO” button on remote control to confirm that “1080i Format” indication appears.
3. Confirm that Horizontal and Vertical position meet the following spec.

Chassis	DW2				unit
Screen Size	42”	55”			inch
a	48±8	58±8			mm
b	45±8	55±8			
c	58±5	73±5			
d	56±5	68±5			
Aspect	16:9 Standard	16:9 Standard			



9. FACTORY RESET

After all of the adjustments of main chassis are finished, perform FACTORY RESET.

(1) Enter Adjustment Mode by the method described in sub-items 1-1 and 1-2 from page 30. (“Adjustment Procedure Start-up”).
(2) From the first menu in Adjustment Mode, select FACT RESET adjustment code.
(3) Activate FACT RESET by pressing “Right” cursor key once.
(4) Other procedure to acces the FACTORY RESET is by sending the 92 hex code with a programable R/C.
(5) The procedure of the FACTORY RESET process is the following and the DATA table is shown next.

BACK TO ADJUSTMENTS

·**Process of FACTORY RESET operation.**

① A screen is colored **magenta** when FACTORY RESET start.

② A screen is colored **green** when FACTORY RESET finish normally.

③ A screen is colored **RED** when FACTORY RESET finish abnormally.

(6) After FACTORY RESET, it should be unplug AC cord.Unplug and plug AC cord and then all settings and data are updated.

(7) When PDP turns ON , it will tune CH03 this is the complete operation of FACTORY RESET process.

9 . DATA TABLE OF SETTING FOR DELIVERY

USER Control Initialization

Settings for delivery (FACTORY RESET)

Function	Initial Data	Condition	42HDS69 55HDS69	42HDT79 55HDT79	42HDX99 55HDX99
Input Mode	Air		X	X	X
Channel	03-1ch		X	X	X
Favorite Channels	Not Registered		X	X	X
PIP On/Off	Off		X	X	X
PIP Mode	SPLIT		X	X	X
POP Position	Middle Right		X	X	X
PIP Position	Bottom Right		X	X	X
Freeze Mode	Main Freeze (1pix)		X	X	X
Master Volume	20 Step		X	X	X
Video					
Picture Mode	Dynamic		X	X	X
Contrast(White Lebel)	100%		X	X	X
Brightness(Black Lebel)	50%		X	X	X
Color	50%		X	X	X
Tint	CENTER		X	X	X
Sharpness	50%		X	X	X
Color Temperature	High		X	X	X
Black Enhancement	High		X	X	X
Contrast Mode	Dynamic		X	X	X
Noise Reduction	Low		X	X	X
Auto Movie Mode	Off		X	X	X
Color Management	-		X	X	-
Color Decoding	-		X	X	-
Auto Color	Off		X	X	-
White Balance	-		X	X	-
Aspect					
Auto Aspect	Off		X	X	X
Mode	4:3 Expanded 16:9 Standard1		X	X	X
Vertical Position	0		X	X	X
Black Side Panel	Off		X	X	X
Reset Video Settings	-		X	X	X

BACK TO ADJUSTMENTS

9. SETTING for Delivery (continued)

Function	Initial Data	Condition	42HDS69 55HDS69	42HDT79 55HDT79	42HDX99 55HDX99
Audio					
Treble	50%		X	X	X
Bass	50%		X	X	X
Balance	CENT		X	X	X
Surround	Off		X	X	X
Bass Boost	On		X	X	X
Audio Source	Stereo	Analog Broadcast	X	X	X
Internal Speakers	On		X	X	X
Auto Noise Cancel	Off	Analog Broadcast	X	X	X
Perfect Volume	Off		X	X	X
Loudness	Off		X	X	X
Language	1 (English)	DTV	X	X	X
Digital Output	Dolby Digital	DTV	X	X	X
DRC	On	DTV	X	X	X
Channel Manager					
Signal Meter					
Channel	-		X	X	X
Strength	-		X	X	X
Peak	-		X	X	X
SNR	-		X	X	X
Auto Channel Scan					
Source	Air		X	X	X
Reset	-		X	X	X
Start	-		X	X	X
Channel List					
FAV	Not Set		X	X	X
CH#	Air/Cable:2-13CH		X	X	X
Scan	On		X	X	X
Lock	Off		X	X	X
ID	-		X	X	X
Locks					
Change Access Code	“0000”,”7777”		X	X	X
Engage Lock					
Set Channel Lock	Not Set		X	X	X
Set Front Panel Lock	Not Set		X	X	X
Movie Ratings	Not Set		X	X	X
TV Ratings	Not Set		X	X	X
Canadian Ratings (Eng.)	Not Set		X	X	X
Canadian Ratings (Frn.)	Not Set		X	X	X
Alternate Ratings U.S.	-		X	X	X
Timers					
Set the Clock					
Time Zone	PST		X	X	X
Date	Jan 2006 01		X	X	X
Time	Not Registered		X	X	X
Automatically Adjust Clock for Daylight Savings Changes.	off		X	X	X
Set Sleep Timer	Not Set		X	X	X
Set Day/Night Timer					
Activate	off		X	X	X
Day Mode On	6:00 AM		X	X	X
Day Mode Off	6:00 PM		X	X	X
Set Event Timer	Not Set		-	—	X

9. SETTING for Delivery (continued)

Function	Initial Data	Condition	42HDS69 55HDS69	42HDT79 55HDT79	42HDX99 55HDX99
Setup					
Menu Preference					
Set The Language	English		X	X	X
Set The Menu Background	Shaded		X	X	X
Set The Screen Saver					
Main Picture Moving	Option 1		X	X	X
Image Power	Max		X	X	X
Screen Wipe	Wipe		X	X	X
Automatic Power Saving	Yes		X	X	X
Set The Inputs					
Input1 Rename	None		X	X	X
Input2 Rename	None		X	X	X
Input3 Rename	None		X	X	X
Input4 Rename	None		X	X	X
Input4 Auto Link (Auto/Remote/Off)	Off		X	X	X
Input5 Rename	None		X	X	X
Set the AV Net	(Wizard will be starting.)		X	-	-
Set Closed Caption					
Caption Display	Auto		X	X	X
Mode (Captions/Text)	Captions		X	X	X
Channel (1/2/3/4)	1		X	X	X
Digital Captions					
Language		1 (English)	X	X	X
Font (Default/1/2/3/4/5/6/7/8)		Default	X	X	X
Size (Small/Standard/Large)		Standard	X	X	X
Style (Standard/High Visibility)		Standard	X	X	X
Set The Output Terminals					
Video Out (TV Tuner Out / Monitor)	Monitor		X	X	X
Audio Out (Fixed/Variable)	Fixed		X	X	X
IR Out	Extended Length		X	X	-
Set The Quick Start Options	off		X	X	X
Reset The Software					
MMC Software Upgrade	-		X	X	X
Reset TV Settings	No		X	X	X
Power Swivel	Locked		X	X	-

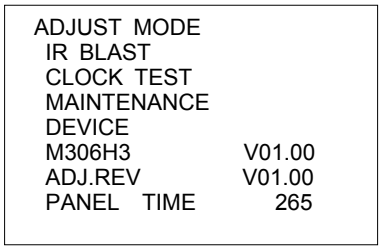
10 OSD Design Select

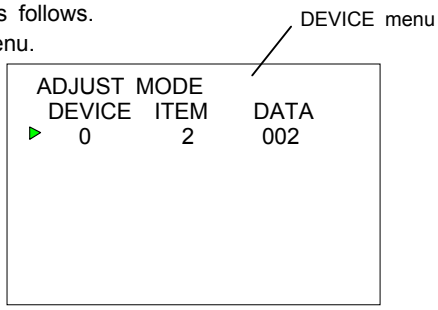
Adjustment Preparation

(1) Go to the Adjust Mode Menu.

(2) Select "DEVICE" in the Adjust Mode Menu as follows.

(3) Press [▶] button to access the DEVICE menu.





・DEVICE : Press 0 button. And press SELECT button to set.
・ITEM : Press 2 button. And press SELECT button to set.
・DATA : Press [▲▼]buttons to select as follows. And press SELECT button to set.

DATA=2 : DIREC (Directors Model)

DATA=1 : A (Regional Model)

DATA=0 : B (National Model)

(4) Unpluged and pluged to update the OSD Design.

Adjustment Procedure

(1) According to a list shown below, select an OSD design.

Class	Model	DATA	OSD Design
X	42/55HDX99	**2**	**DIREC : Directors**
T	42/55HDT79	**1**	**A : Regional**
S	42/55HDS69	**0**	**B : National**

BACK TO ADJUSTMENTS

TROUBLESHOOTING FLOW CHARTS

TROUBLE SHOOTING for DIGITAL MODULE (Device error check)

Digital Main P.W.B has five LED (KNIGHT RIDER) on board.
After Power ON these LED will be turned on in sequence as follows.
It may take a few seconds for the sequence.

LED sequence

Sequence	D205 (Red) <PiO04>	D204 (Green) <PiO03>	D203 (Yellow) <PiO02>	D202 (Orange) <PiO01>	D201 (Red) <PiO00>
1 (Start)	○	○	○	○	●
2	○	○	○	●	●
3	○	○	●	●	●
4	○	●	●	●	●
5 (End)	○	○	○	○	○

○ is turn off the LED, ● is Lighting the LED

After Program is loaded without error, all LED will be turned off.
Any LED should not light.
If some errors occur, LED will show the error pattern.

(1) Check that LED is not lit.
(2) If LED is lit, refer to the following table and check the involved devices.

Location of LEDs

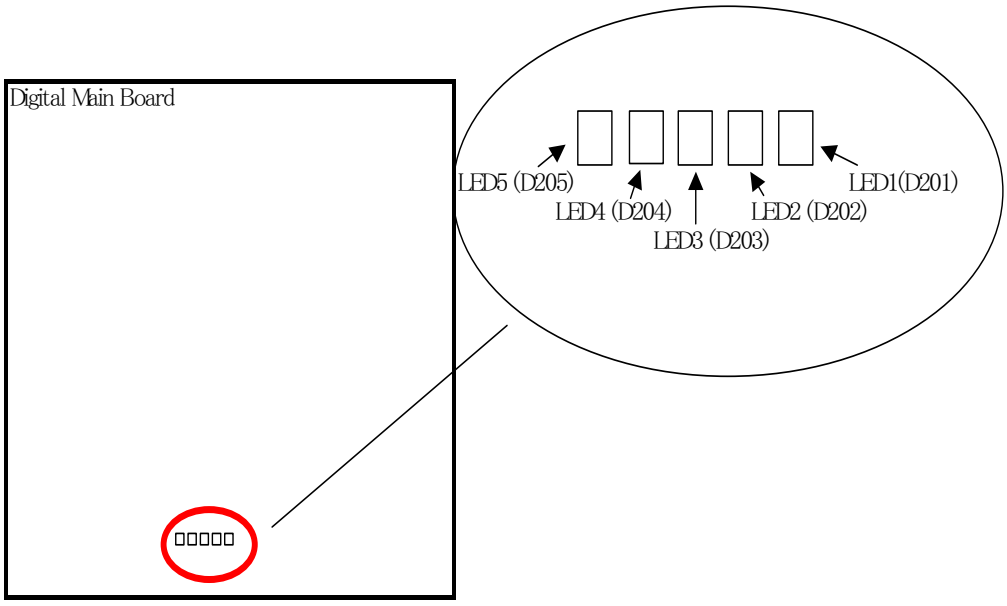


TABLE OF CONTENTS

TROUBLESHOOTING FLOWCHARTS

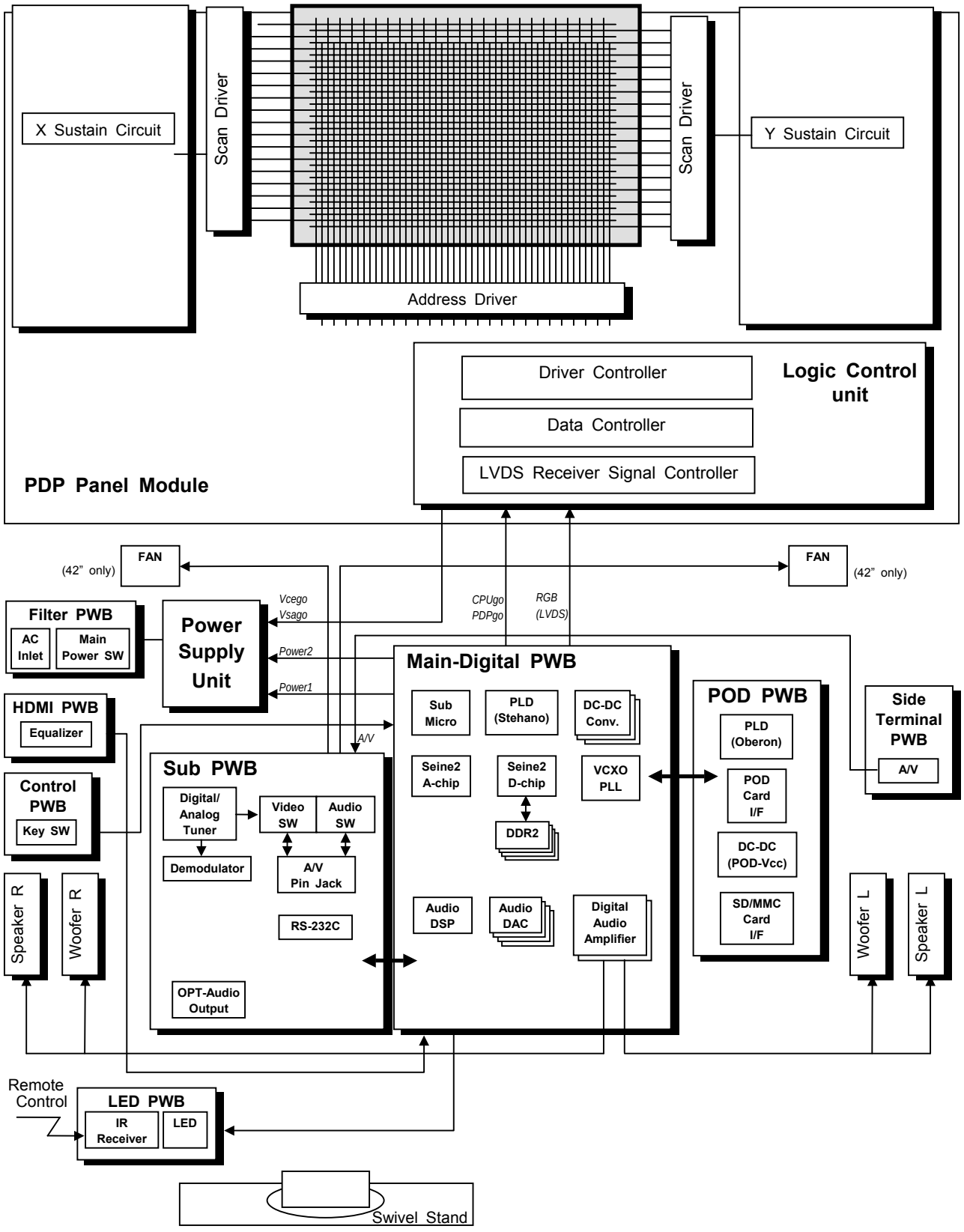
LED patterns for involved devices

No.	LED5	LED4	LED3	LED2	LED1	Device	Circuit No	Remarks
	D205 (Red)	D204 (Green)	D203 (Yellow)	D202 (Orange)	D201 (Red)			
1	○	○	○	○	○	–	–	No Error
2	○	○	○	○	●	Digital Tuner		Video/Audio of Cable/Air
3	○	○	○	●	○	Analog Tuner		Video/Audio of Cable/Air
4	○	○	●	○	○	MPEG(Seine2)		Video/Audio of Cable/Air
5	○	○	●	○	●	Graphics(Seine2)		All OSD
6	○	○	●	●	○	Flash Memory		Loading Program
7	○	○	●	●	●	I^2C(Seine2)		
8	○	●	○	○	○	IEEE1394		
9	○	○	○	●	●	DEMUX(Seine2)		
10	○ (42" only)	●	○	●	○	–	–	(42" only)
11	○	●	○	●	●	–	–	
12	○	●	●	○	○	–	–	
13	○	●	●	○	●	–	–	
14	○	●	●	●	○	–	–	
15	○	●	●	●	●	–	–	
16	●	○	○	○	○	–	–	
17	●	○	○	○	●	PDP Panel		
18	●	○	○	●	○	Sub Micro		
19	●	○	●	○	●	Seine OSD		
20	●	●	●	●	○	DDR SDRAM		

○ is turn off the LED, ● is lighting the LED.

CIRCUIT BLOCK DIAGRAM

[42/55HDS69]



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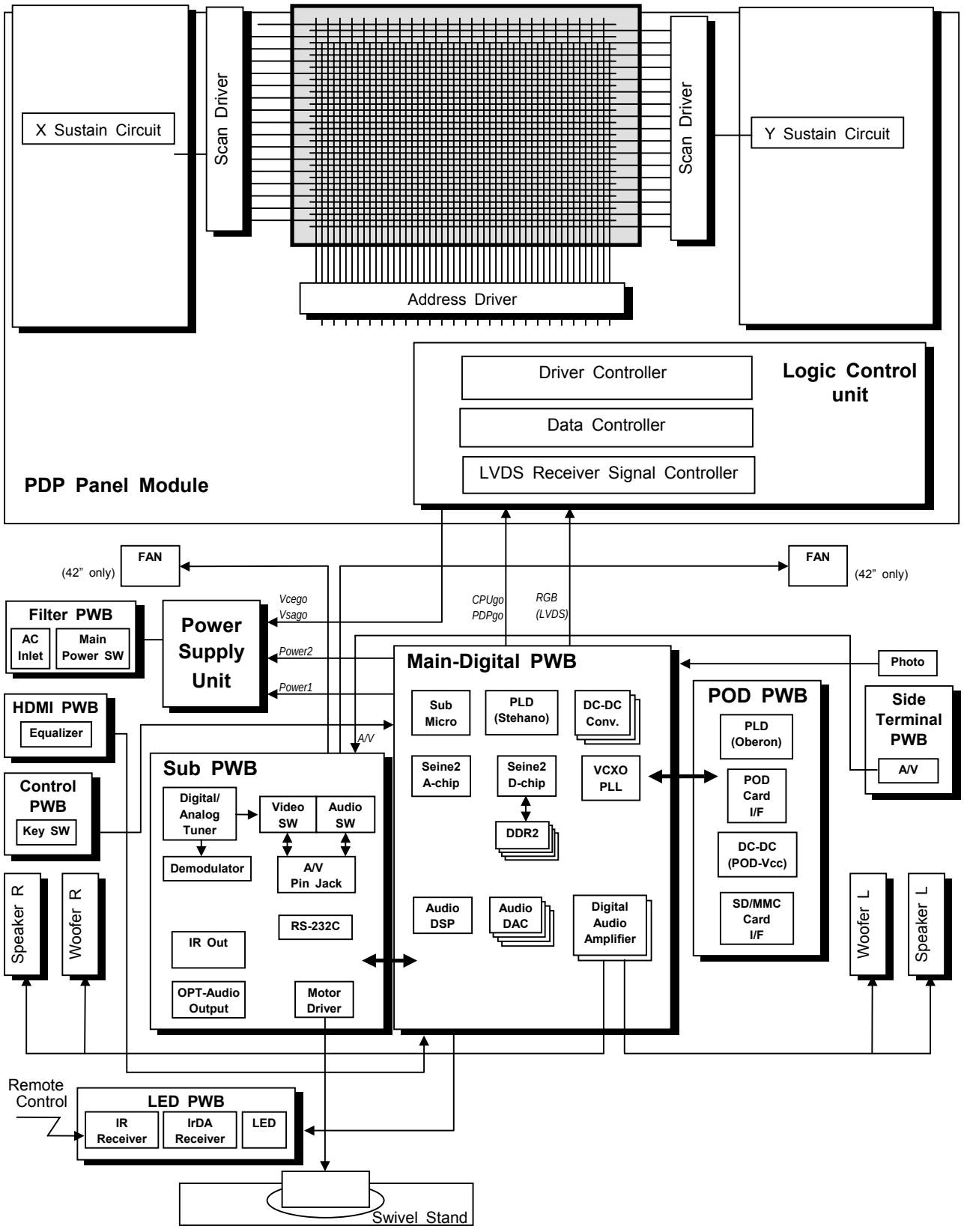
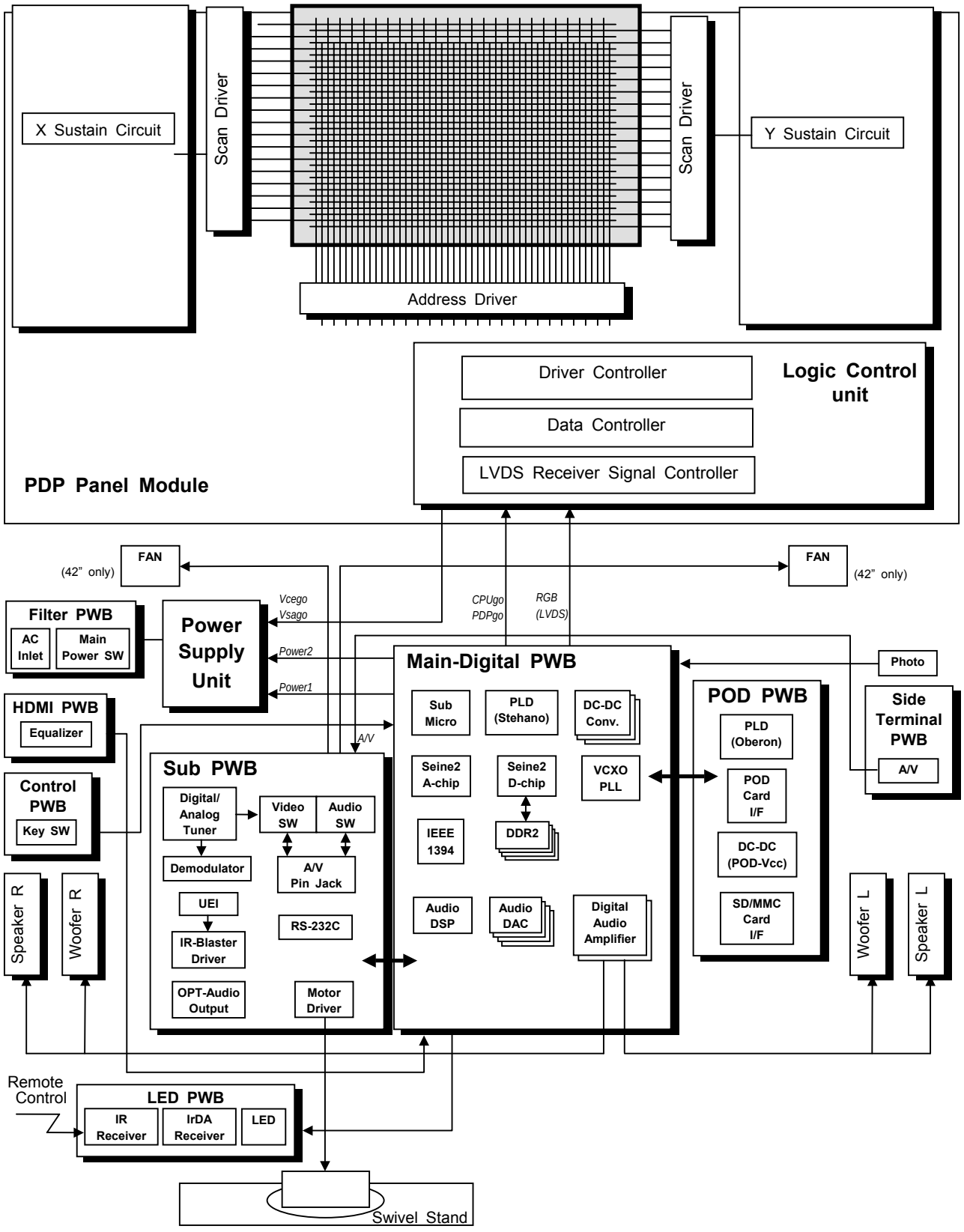
CIRCUIT BLOCK DIAGRAM

[42/55HDT79]

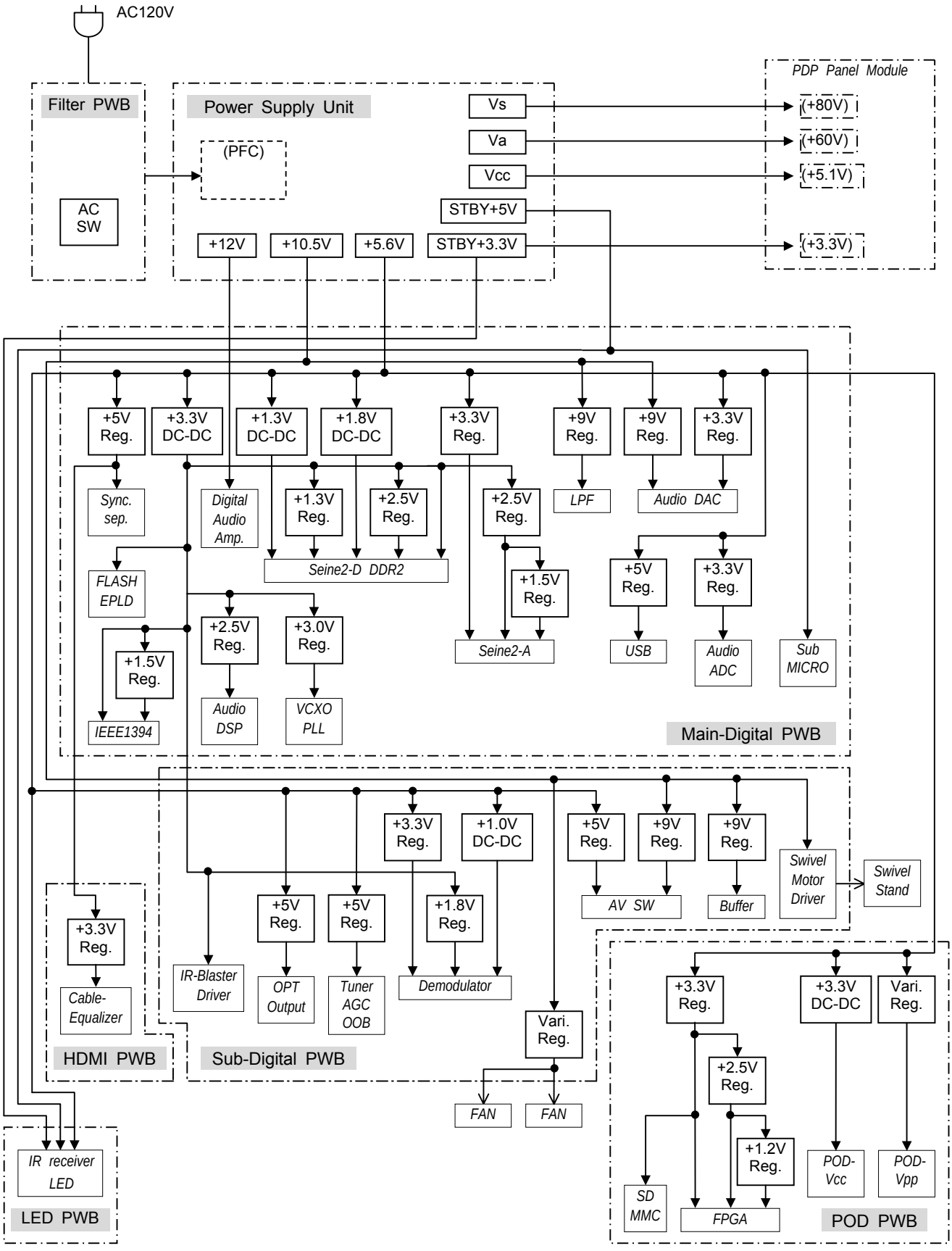


CIRCUIT BLOCK DIAGRAM

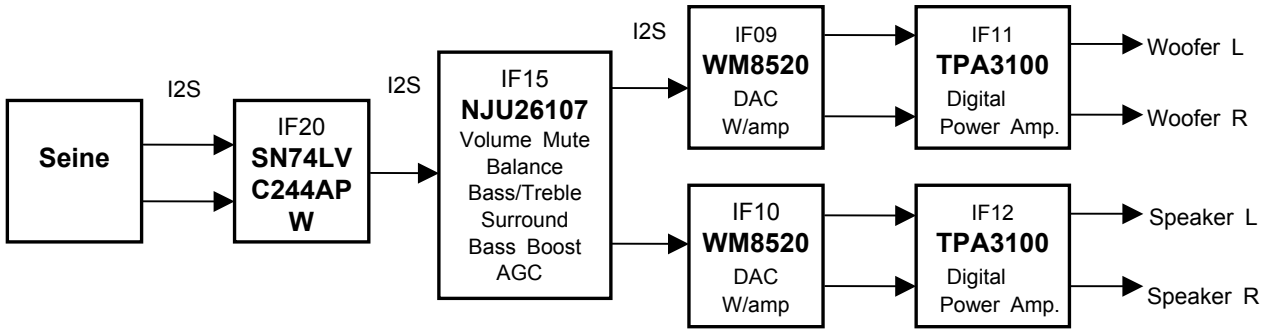
[42/55HDX99]



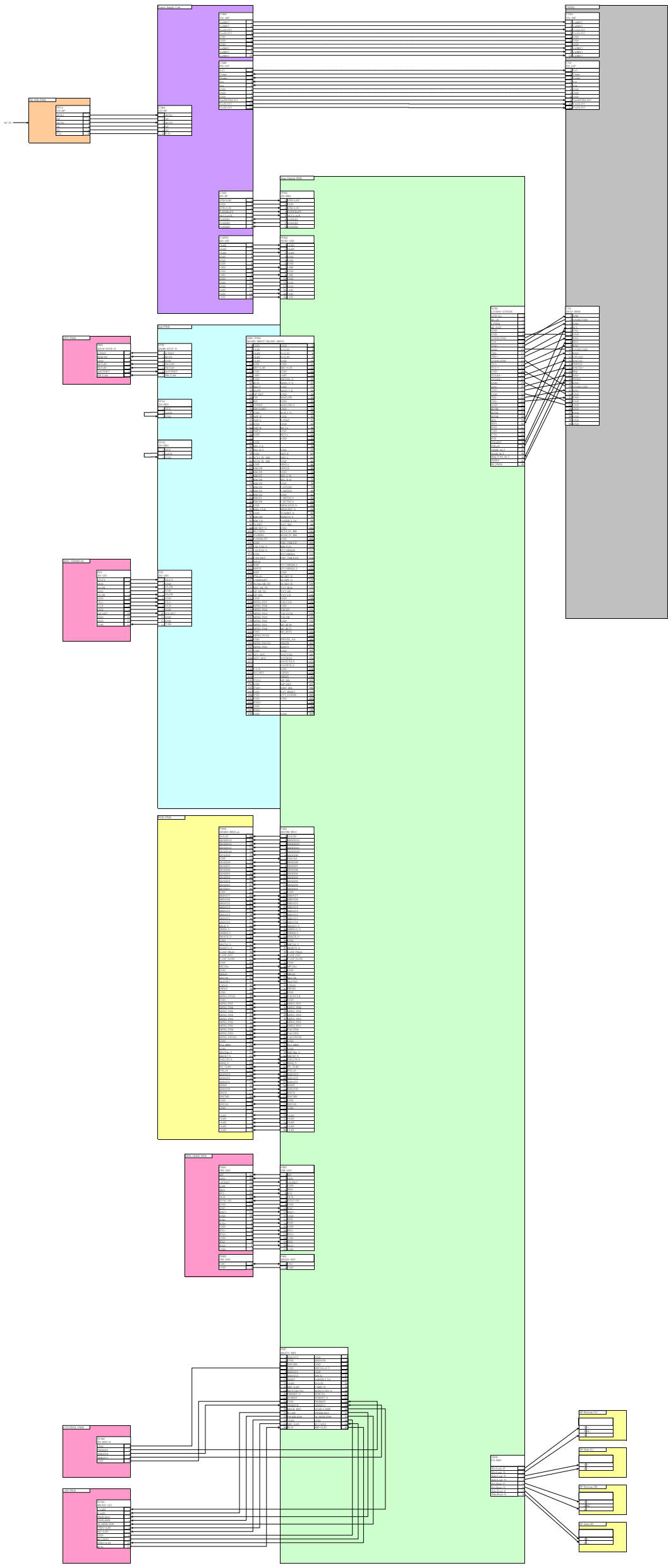
POWER SYSTEM BLOCK DIAGRAM



AUDIO CIRCUIT BLOCK DIAGRAM



CONNECTION DIAGRAM



Power Supply Unit

Filter PWB

Main Digital PWB

Sub Digital PWB

Opt PWB

Side Terminal PWB

Panel

AC IN

PPU1
VH-6P

AC(L)	1
NC	2
AC(N)	3
NC	4
NC	5
F.G.	6

CN61
VH-6P

1	AC(L)
2	NC
3	AC(N)
4	NC
5	NC
6	F.G.

CN64
VH-10P

Va(60V)	1
Va(60V)	2
Vcc(5.1V)	3
Vcc(5.1V)	4
GND	5
GND	6
GND	7
Va(80V)	8
Va(80V)	9
Va(80V)	10

CN68
PH-11P

N.C.	1
Vsago	2
Vcogo	3
Vrs	4
Vra	5
GND	6
GND	7
GND	8
Vsc(2STB3.3V)	9
Vcc(5.1V)	10
Vcc(5.1V)	11

CN21
VH-10P

1	Va(60V)
2	Va(60V)
3	Vcc(5.1V)
4	Vcc(5.1V)
5	GND
6	GND
7	GND
8	Va(80V)
9	Va(80V)
10	Va(80V)

CN3
PH-11P

1	N.C.
2	Vsago
3	Vcogo
4	Vrs
5	Vra
6	GND
7	GND
8	GND
9	Vsc(2STB3.3V)
10	Vcc(5.1V)
11	Vcc(5.1V)

CN63
EH-8P

STB+5.0V	1
GND	2
STB+3.3V	3
PoWERoFF	4
ACCLoCK	5
PoWER1	6
PoWER2	7
PoWER3	8

PPM1
ZH-08H

1	STB+5.0V
2	GND
3	STB+3.3V
4	PoWERoFF
5	ACCLoCK
6	PoWER1
7	PoWER2
8	PoWER3

CNPS
EH-15P

+5.6V	1
+5.6V	2
+5.6V	3
GND	4
GND	5
GND	6
+16V	7
GND	8
+16V	9
GND	10
GND	11
GND	12
+12V	13
+12V	14
+12V	15

PPM2
DF3D-15H

1	+5.6V
2	+5.6V
3	+5.6V
4	GND
5	GND
6	GND
7	+16V
8	GND
9	+16V
10	GND
11	GND
12	GND
13	+12V
14	+12V
15	+12V

PWS
52418-07HS-D

S/PDIT	
RGB+5V	
GND	
MoToR+	
MoToR-	
IoNTDET	
SW_CoM	

PTW
53290-07VP-D

1	S/PDIT
2	R+5V
3	GND
4	MoToR+
5	MoToR-
6	IoNTDET
7	SW_CoM

PFA1
ZH-03H

1	VCC
2	LoCK
3	GND

PFA2
ZH-03H

1	VCC
2	LoCK
3	GND

PFS
ZH-13V

VS_CV	1
GND	2
VS_PB	3
GND	4
VS_PR	5
GND	6
VS_L	7
VS_R	8
GND	9
NS_DET	10
GND	11
GND	12
T+9V	13

PTF
ZH-13H

1	VS_CV
2	GND
3	VS_PB
4	GND
5	VS_PR
6	GND
7	VS_L
8	VS_R
9	GND
10	NS_DET
11	GND
12	GND
13	T+9V

JMSU/PSM
501493-200VP/501492-200VS

1	GND	GND	2
3	+5.6V	D+3.3V	4
5	+5.6V	D+3.3V	6
7	+5.6V	D+3.3V	8
9	+5.6V	GND	10
11	GND	GND	12
13	SBY+5.0V	SBY+3.3V	14
15	GND	GND	16
17	+16V	+10V	18
19	GND	SWVEL_G	20
21	R_IN	MAIN_Y/V	22
23	RoUT	GND	24
25	RoFF	MAIN_Y_E	26
27	HP_DET	GND	28
29	PIN	MAIN_PB	30
31	RIN	GND	32
33	CPDET	MAIN_PR/C	34
35	SWVLDET	GND	36
37	GND	SUB_Y/V	38
39	AEP_R	GND	40
41	AEP_L	S/PDIT	42
43	GND	GND	44
45	ASP_R	SD_Yo	46
47	ASP_L	GND	48
49	GND	SD_Co	50
51		GND	52
53	GND		54
55	SEL_L_S		56
57	SEL_R_S	GND	58
59	GND	HFI_R	60
61	SCL1_3V_100	HFI_L	62
63	SDA1_3V_100	GND	64
65	GND	HDD_L	66
67	656_D9	HDD_R	68
69	656_D8	GND	70
71	656_D7	SEL_L_M	72
73	656_D6	SEL_R_M	74
75	656_D5	GND	76
77	656_D4	UATXD3	78
79	656_D3	UARXD3	80
81	656_D2	GND	82
83	656_D1	UARTS3_N	84
85	656_D0	UACTS3_N	86
87	GND	MDM_DCD_N	88
89	656o_CLK	MDM_RST_N	90
91	GND	TUNRST_N	92
93	656_HD	RESET2_N	94
95	656_VD	PoWER_2_Td	96
97	ALERT	ANT_SEL	98
99	881_RST_N	GND	100
101	IR_CAPN	SCL0_3V_400	102
103	AVIRSEL	SDA0_3V_400	104
105	PoWERoFF	GND	106
107	GND	FEC_TMCCF	108
109	EL_TXD_N	656_FLD	110
111	EL_RXD_N	STUNREQ0	112
113	GND	STUNREQ1	114
115	FAN_DET	FEC_TMCCF2	116
117	MPoE		118
119	MSD	STUNREQ0_2	120
121	MPCE	STUNREQ1_2	122
123	MST	GND	124
125	PNLoN	SCART_R	126
127	NBSHoRT	SCART_G	128
129	AUDio_MUTE	SCART_B	130
131	REC_MUTE	TXT_BLK	132
133	HP_MUTE	TXT_HD	134
135	HP_SEL	TXT_VD	136
137	GND	GND	138
139	MPEG_PD7	TS3_CLK	140
141	MPEG_PD6	GND	142
143	MPEG_PD5	TS3_EN	144
145	MPEG_PD4	TS3_SYNC	146
147	MPEG_PD3	TS3_D0	148
149	MPEG_PD2	GND	150
151	MPEG_PD1	BD_dET0	152
153	MPEG_PD0	BD_dET1	154
155	GND	BD_dET2	156
157	MPEG_PCLK		158
159	GND	SWIVEL_Ari	160
161	MPEG_PSYNC	DEST0	162
163	MPEG_PEN	DEST1	164
165	GND	GND	166
167	STV_AFC	AVCTXD	168
169	MTV_AFC	AVCIND	170
171		AVCCTS_N	172
173		AVCRTS_N	174
175	C1_IN	GND	176
177	SIG_DET	CRXIN	178
179		DRXIN	180
181	TVS_L	SW_SEL	182
183	GND	DP_DET	184
185	TXD+	232C_SEL	186
187	GND	EXT_RESET	188
189	TXD-	DTT_PoWER	190
191	GND	GND	192
193	RXIN+		194
195	GND		196
197	RXIN-		198
199	GND	GND	200

EC01
LVDS41-CONNE

LCD_Go	1
BL_oN	2
I-PWM	3
BL_iNIT	4
GND	5
GND	6
GND(LVDS)	7
TA1-	8
TA1+	9
GND	10
TB1-	11
TB1+	12
GND(LVDS)	13
TC1-	14
TC1+	15
GND	16
TCLK1-	17
TCLK1+	18
GND	19
TD1-	20
TD1+	21
GND	22
TE1-	23
TE1+	24
GND	25
BIT02	26
BIT01	27
BIT00	28
SCL	29
SDA	30
ROD	31
TXD	32
CTS	33
RTS	34
PNLRST	35
PNLoN	36
TEMP_ALT	37
DoorK_ALT	38
IRQ/FAN_ALT	39
PDWN	40
BL_PWM	41

CN1
DF13-30DS

1	RA0-
2	GND(LVDS)
3	RA0+
4	SCL
5	RA1-
6	GND
7	RA1+
8	SDA
9	RA2-
10	GND(LVDS)
11	RA2+
12	CPLGO
13	RACLK-
14	PDPGO
15	RACLK+
16	IRQ
17	RA3-
18	PDWN
19	RA3+
20	GND(LVDS)
21	RA4-
22	GND
23	RA4+
24	GND
25	GND
26	GND
27	GND
28	GND
29	GND
30	GND

CH 1 58(b)

Main Digital PWB

POD PWB

PW01 591864-80H Low		PA01 591786-8011	
D+3.3V	80	1	D+3.3V
SHADD13	79	2	SHADD13
SHADD12	78	3	SHADD12
SHADD11	77	4	SHADD11
SHADD10	76	5	SHADD10
SHADD9	75	6	SHADD9
GND	74	7	PwD_Ari
SHADD8	73	8	SHADD8
SHADD7	72	9	SHADD7
SHADD6	71	10	SHADD6
SHADD5	70	11	SHADD5
SHADD4	69	12	SHADD4
SHADD3	68	13	SHADD3
SHADD2	67	14	SHADD2
SHADD1	66	15	SHADD1
GND	65	16	GND
SHDAT7	64	17	SHDAT7
SHDAT6	63	18	SHDAT6
SHDAT5	62	19	SHDAT5
SHDAT4	61	20	SHDAT4
SHDAT3	60	21	SHDAT3
SHDAT2	59	22	SHDAT2
SHDAT1	58	23	SHDAT1
SHDAT0	57	24	SHDAT0
SHoE_N	56	25	SHoE11_N
SHWE_N	55	26	SHWE11_N
SHRHR_N	54	27	SHRHR_N
SHACK_N	53	28	SHACK_N
GND	52	29	GND
SHCLK_3	51	30	SHCLK_3
RESET1_N	50	31	RESET1_N
CoNF_PRoG	49	32	CoNF_PRoG
CoNF_INIT	48	33	CoNF_INIT
CoNF_DoNE	47	34	CoNF_DoNE
GND	46	35	GND
MCLKo	45	36	MCLKo
GND	44	37	GND
MDoD	43	38	MDoD
MoVAL	42	39	MoVAL
MoSTRT	41	40	MoSTRT
CRXIN	40	41	CRXIN
DRXIN	39	42	DRXIN
GND	38	43	GND
MPEG_PCLK	37	44	PwD_PCLK
GND	36	45	GND
MPEG_PD7	35	46	MPEG_PD7
MPEG_PD6	34	47	MPEG_PD6
MPEG_PD5	33	48	MPEG_PD5
MPEG_PD4	32	49	MPEG_PD4
MPEG_PD3	31	50	MPEG_PD3
MPEG_PD2	30	51	MPEG_PD2
MPEG_PD1	29	52	MPEG_PD1
MPEG_PD0	28	53	PwD_PD0
MPEG_PEN	27	54	PwD_PEN
MPEG_PSYNC	26	55	PwD_PSYNC
GND	25	56	GND
PLL_66M	24	57	PLL_66M
GND	23	58	GND
SBCE6a_N	22	59	SBCE6a_N
SBCE7_N	21	60	SBCE7_N
PwD_CD_N	20	61	PwD_CD_N
IREQ_N	19	62	IREQ_N
PG_+5.6V	18	63	PG_+5.6V
PNLoN	17	64	PNLoN
SDDAT3	16	65	SDDAT3
SDDAT2	15	66	SDDAT2
SDDAT1	14	67	SDDAT1
SDWP	13	68	SDWP
SDDAT0	12	69	SDDAT0
SDCD	11	70	SDCD
SDCMD	10	71	SDCMD
GND	9	72	GND
SDCLK	8	73	SDCLK
GND	7	74	GND
	6	75	
+5.6V	5	76	+5.6V
+5.6V	4	77	+5.6V
+5.6V	3	78	+5.6V
+5.6V	2	79	+5.6V
+5.6V	1	80	+5.6V

Side HDMI PWB

P901 FIR-21H		P903 FIR-21H	
WP	21	1	WP
HPD	20	2	HPD
+5VDET	19	3	+5VDET
GND	18	4	GND
SDA	17	5	SDA
SCL	16	6	SCL
ACK	15	7	ACK
SYNC+5V	14	8	SYNC+5V
GND	13	9	GND
RXC-	12	10	RXC-
RXC+	11	11	RXC+
GND	10	12	GND
RX0-	9	13	RX0-
RX0+	8	14	RX0+
GND	7	15	GND
RX1-	6	16	RX1-
RX1+	5	17	RX1+
GND	4	18	GND
RX2-	3	19	RX2-
RX2+	2	20	RX2+
GND	1	21	GND

P902 FIR-21H		P901 591331-02V	
CEC	2	1	CEC
GND	1	2	GND

Control PWB

PCM2 PH-05H-D	
GND	1
PWRKEY	2
ADKEY0	3
ADKEY1	4
GND	5

LED PWB

PCM1 591331-11V	
G_LED	1
R_LED	2
PWRLED1	3
PWRLED0	4
ALARMLED0	5
STBY+5.0V	6
SIG+5.6V	7
GND	8
IR_CAPN	9
STBY+3.3V	10
IR_IN	11

PMC 591571-40H			
1	SDDAT3	GND	2
3	GND	SDDAT0	4
5	SDCMD	GND	6
7	GND	SDCLK_OUT	8
9	SDDAT1	GND	10
11	SDDAT2	SDCD	12
13	SDWP	PoWER_2_Td	14
15	+5.6V	D+3.3V	16
17	SBY+5.0V	CARD_IN	18
19	SCCLKCNG	SCOVCCEN_N	20
21	PRESET_N	SCOCTo	22
23	SC0RST	SC0DET_N	24
25	GND	PWRKEY	26
27	ADKEY0	ADKEY1	28
29	BACK_RST	GLED_LAMP	30
31	R_LED	PWERLED1	32
33	PWERLED0	ALARMLED0	34
35	+5.6V	GND	36
37	SBY+5.0V	IR_CAPN	38
39	IR_IN	SBY+3.3V	40

PSPK PA-08H	
WoLout-P	1
WoLout-N	2
SideLout-P	3
SideLout-N	4
WoRout-P	5
WoRout-N	6
SideRout-P	7
SideRout-N	8

To Speakers

Cable assembly - Main Digital to Control & LED
Part number EF26021C

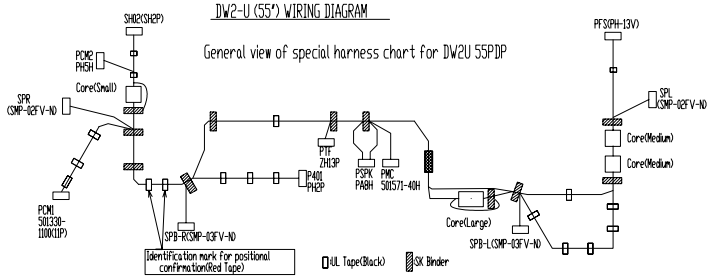
CH 1

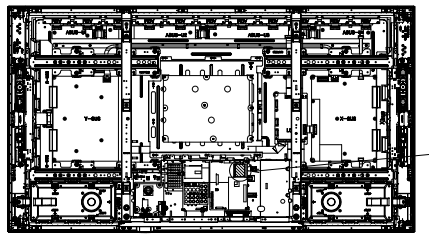
CH 4

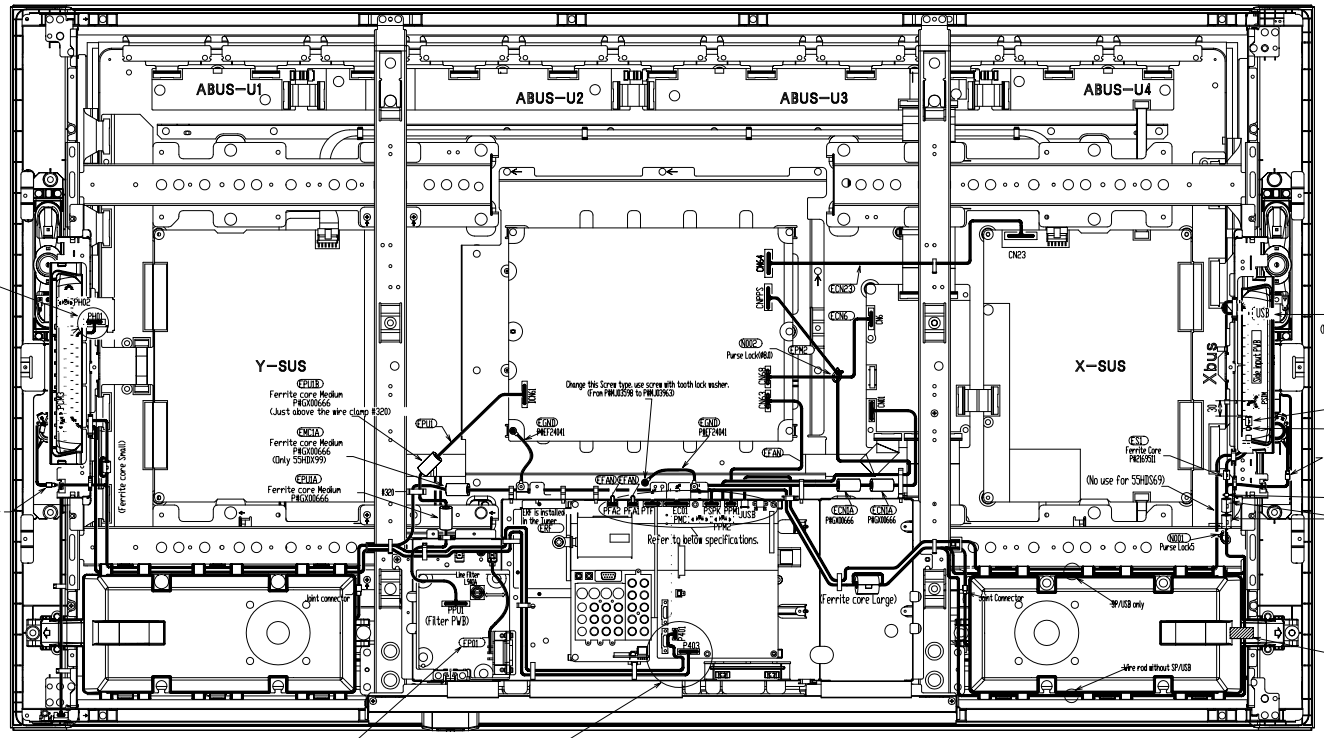
FINAL WIRING DIAGRAM

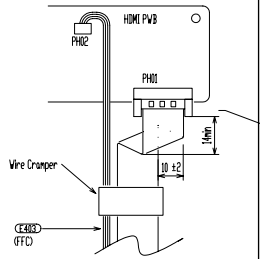
Table of useing cable

Connector side		Plug Pin 1		Plug Pin 2		Compound harness making application
Name	Assy List	Board or Location	Name	Board or Location	Name	
PFS	Final Ass'y	SUB	PTF	SIDE-TERMINAL	PFS	※ ○
EMC	Final Ass'y	CONTROL	PCM2	MAIN DIGITAL	PMC	※ ○
		LED_LED	PCM	MAIN DIGITAL	PMC	※ ○
E401	Final Ass'y	SIDE-HDMI	PH02	MAIN DIGITAL	P401	※ ○
ESP	Final Ass'y	Main DIGITAL	PSPK	SP_R(2.2)	SPR	※ ○
		Main DIGITAL	PSPK	SP_WF_R(3.1)	SPR	※ ○
		Main DIGITAL	PSPK	SP_L(2.2)	SPL	※ ○
		Main DIGITAL	PSPK	SP_WF_L(3.1)	SPR	※ ○
EUSB	Final Ass'y	Main DIGITAL	-	Cable mount metal	-	
ECN1	Final Ass'y	Main DIGITAL	ECN1	LOGIC(PANEL)	CN01	
E403	Final Ass'y	SIDE-HDMI	PH01	MAIN DIGITAL	P403	
ECN6	Final Ass'y	POWER	CN68	PANEL LOGIC	CN6	
ECN23	Final Ass'y	POWER	CN64	PANEL X-SUS	CN23	
EPID	Final Ass'y	POWER	CN61	FILTER	PFIL	
EPMC	Final Ass'y	POWER	CNPPS	MAIN DIGITAL	PPMC	
EPMI	Final Ass'y	POWER	CN63	MAIN DIGITAL	PPMI	
EAUL	Final Ass'y	PSU	PVU1	MAIN DIGITAL	PAU1	
EPFI	Filter PWB	Filter PWB(Inlet GND	-	Chassis Frame	-	
EFAN	Final Ass'y	SUB	PFA1 PFA2	-	-	







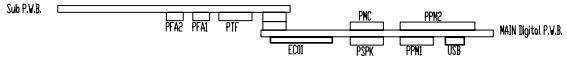


E403(FFC) is bent to the style like the above figure.

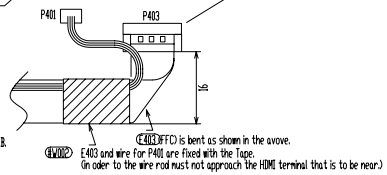
※1 Regarding ECN23 and ECN6, insert connectors while installing Power Supply PWB in the panel.

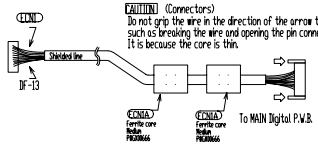
Specification
1. This drawing shows the wiring diagram for 55"PDP European Chassis. The connection and wire styling are in the figure.
2. This drawing shows the rear view of the set.
3. Lock lead holders surely.
4. Cores with ( ) round brackets should be delivered integrated with Harness.

Arrangement chart of Connector on top Signal Chassis.



Layout the Cable "EPID" not to come close Line Filter "LF60A".





CAUTION (Connectors)
Do not grip the wire in the direction of the arrow to avoid defects. such as breaking the wire and opening the pin connector part. It is because the core is thin.

"ECN1(LVDS)" has a fragile connector housing. Be careful not to break it during the connecting operation. During the connecting operation,push carefully both side housing latch terminal to the insert direction not to break it.

Push the arrow point to insert direction straightforward.

QUICK DISASSEMBLE GUIDE (Back Cover 1)

① Remove Screw M3M 6*12X (2 Pcs.)

② Remove Screw M3M 6*18HX (2 Pcs.)

③ Remove Screw M3M 6*18HX (2 Pcs.)

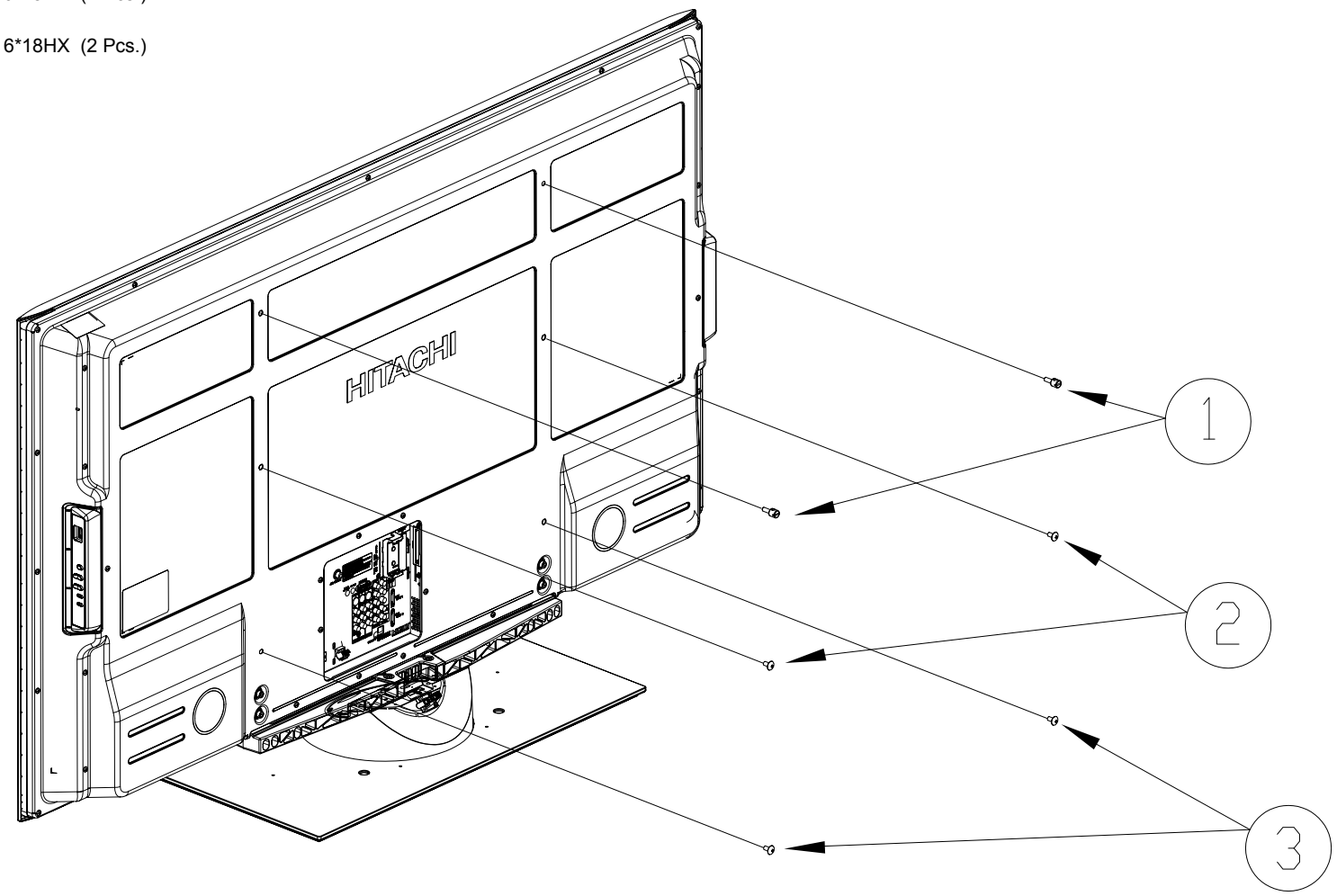
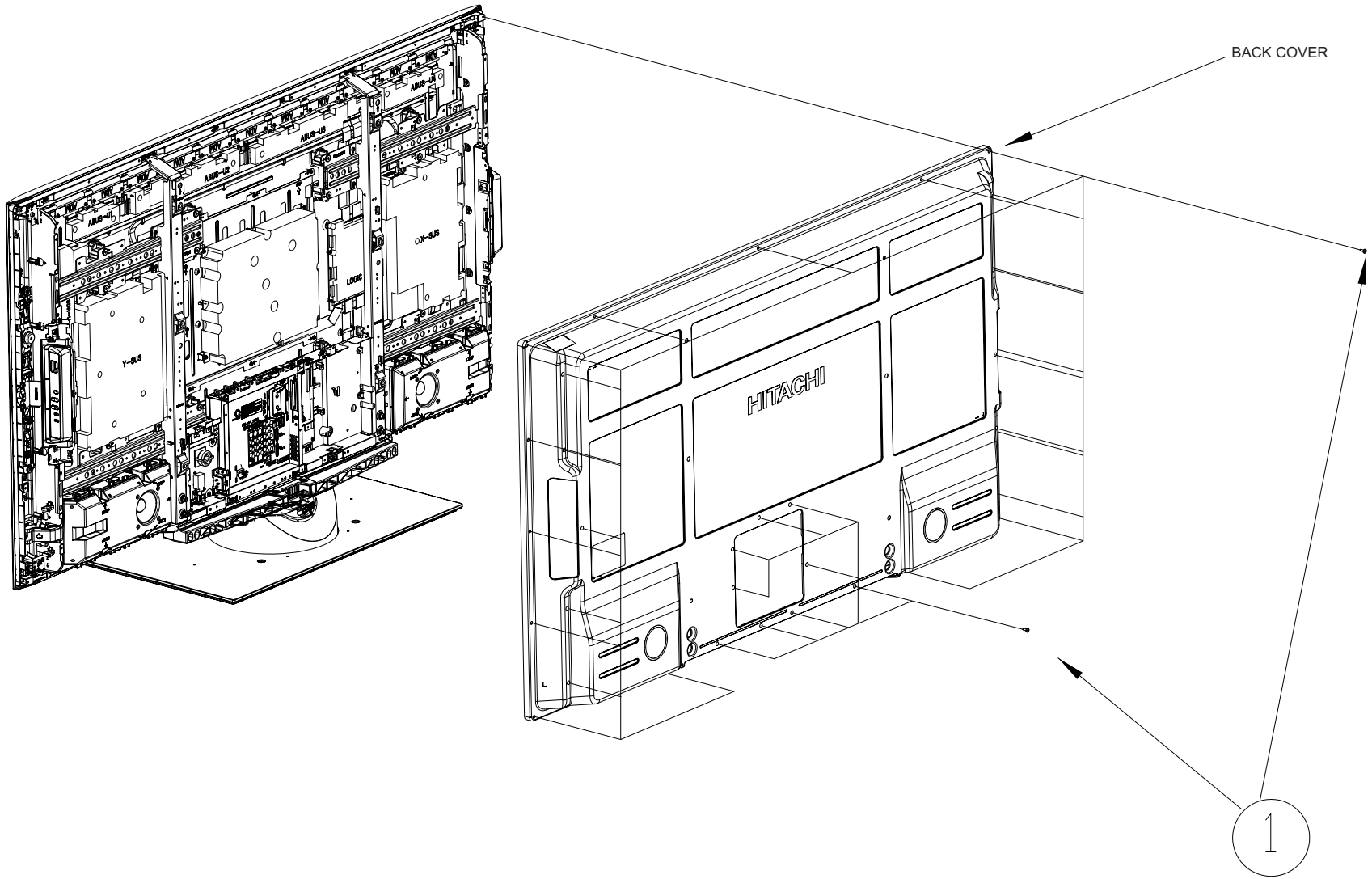


TABLE OF CONTENTS

QUICK DISASSEMBLE GUIDE (Back Cover 2)

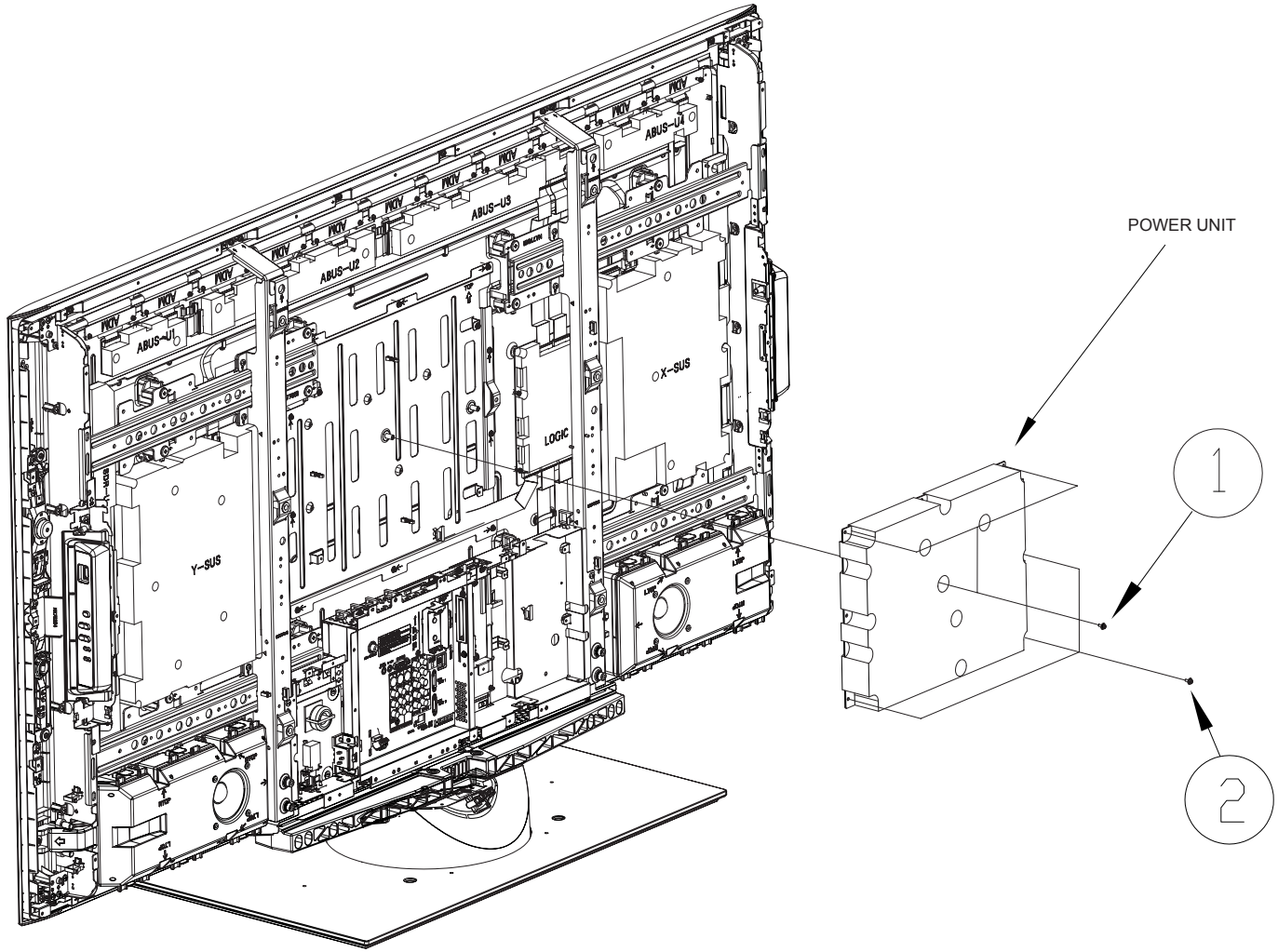
① Remove Screw M3D_4*10BD (34 Pcs.)



QUICK DISASSEMBLE GUIDE (Power Unit)

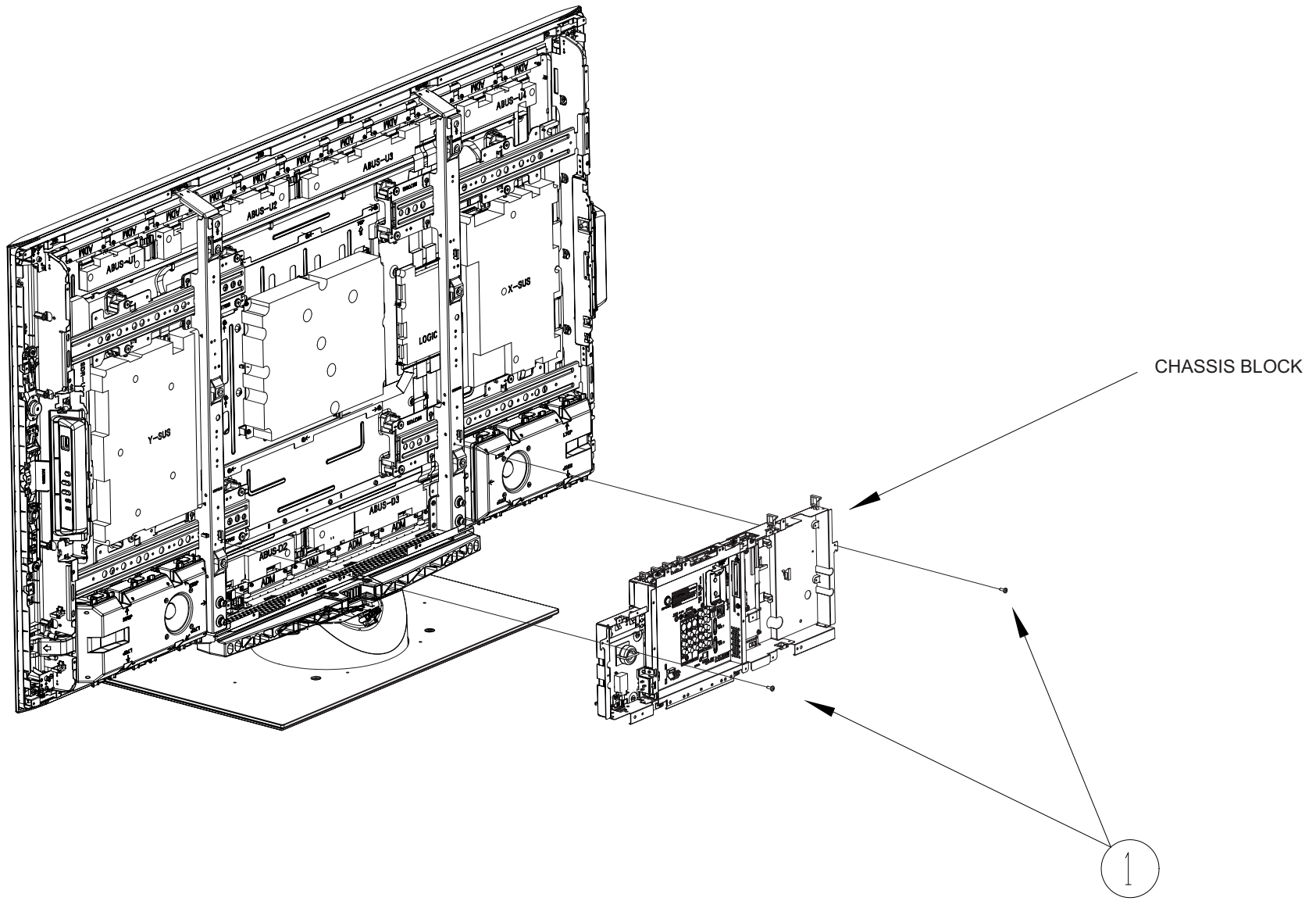
① Remove Screw M3E 3*8 (3 Pcs.)

② Remove Screw M3M 3*8 (3 Pcs.)



QUICK DISASSEMBLE GUIDE (Chassis Block)

① Remove Screw M3E 4*10 (2 Pcs.)



QUICK DISASSEMBLE GUIDE (Terminal Metal)

② Remove Screw M3E 3*8 (4 Pcs.)

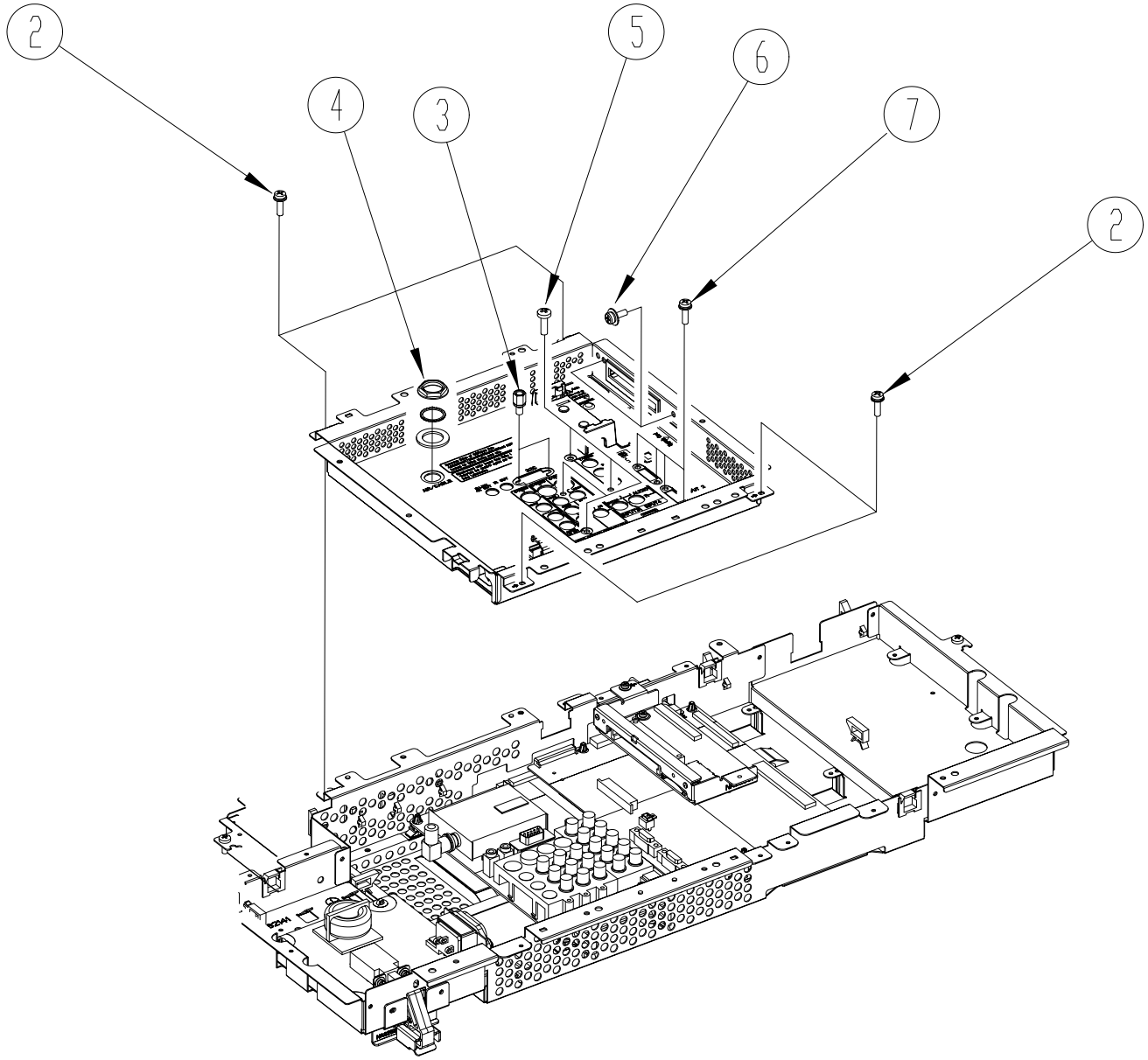
③ Remove Screw D-Su51 (2 Pcs)

④ Remove Tuner Nut and Washer

⑤ Remove Screw T2B 3*10 (4 Pcs.)

⑥ Remove Screw M3E 3*8 (4 Pcs.)

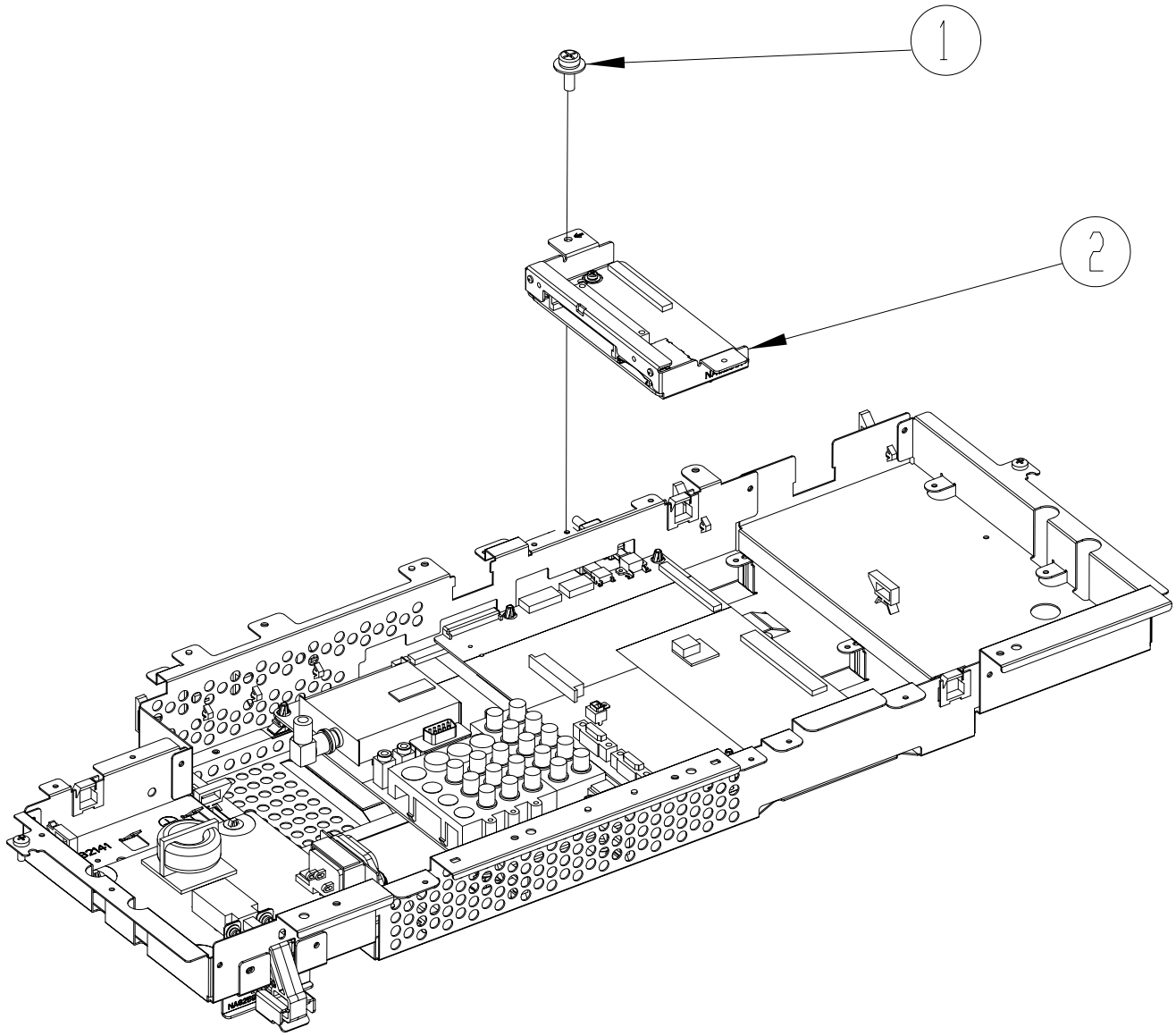
⑦ Remove Screw M3M 3*6 (4 Pcs.)



QUICK DISASSEMBLE GUIDE (POD PWB)

① Remove Screw M3E 3*8

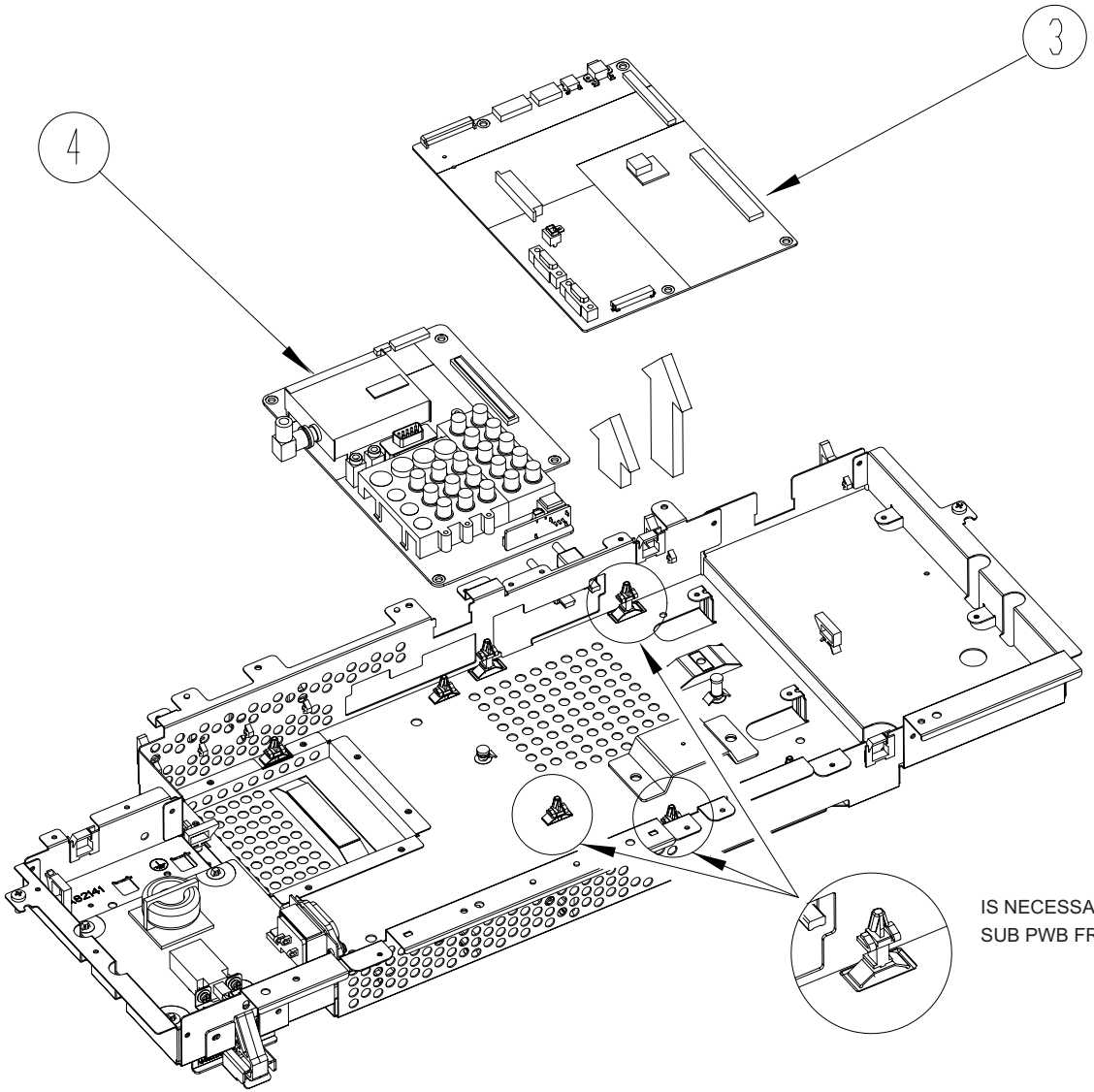
② Remove POD PWB Assy



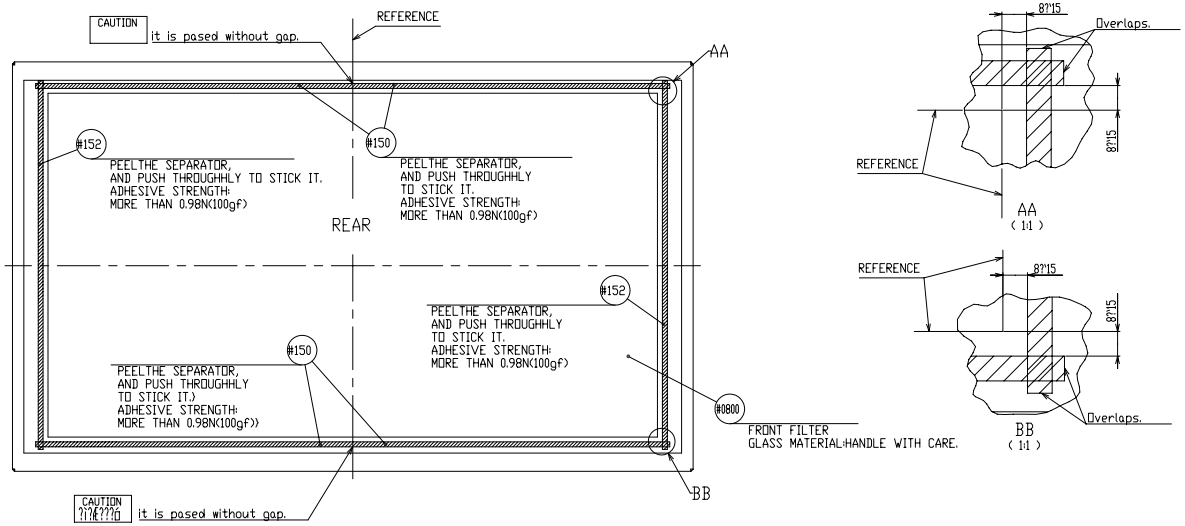
QUICK DISASSEMBLE GUIDE (Main / Sub Digital PWB)

③ Remove Main Digital PWB Assy

④ Remove Sub Digital PWB Assy

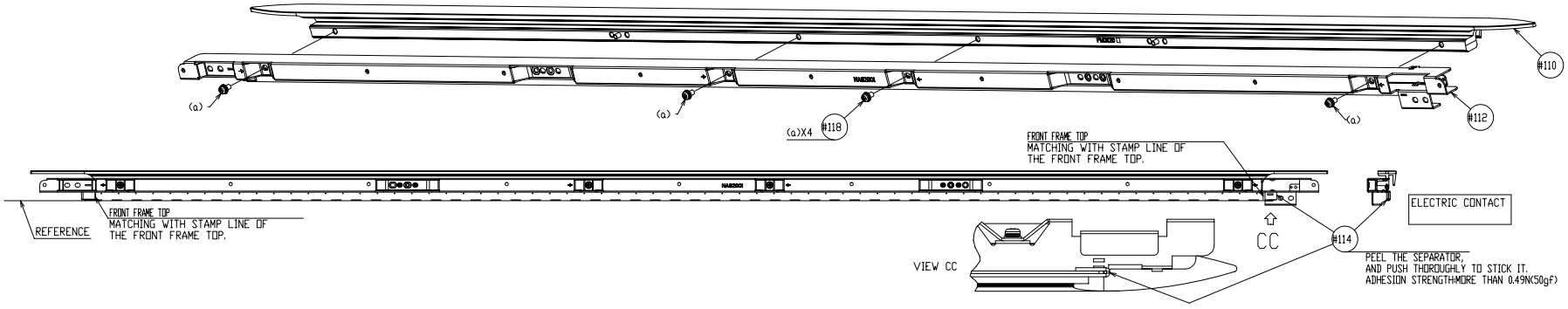


FILTER ASS'Y

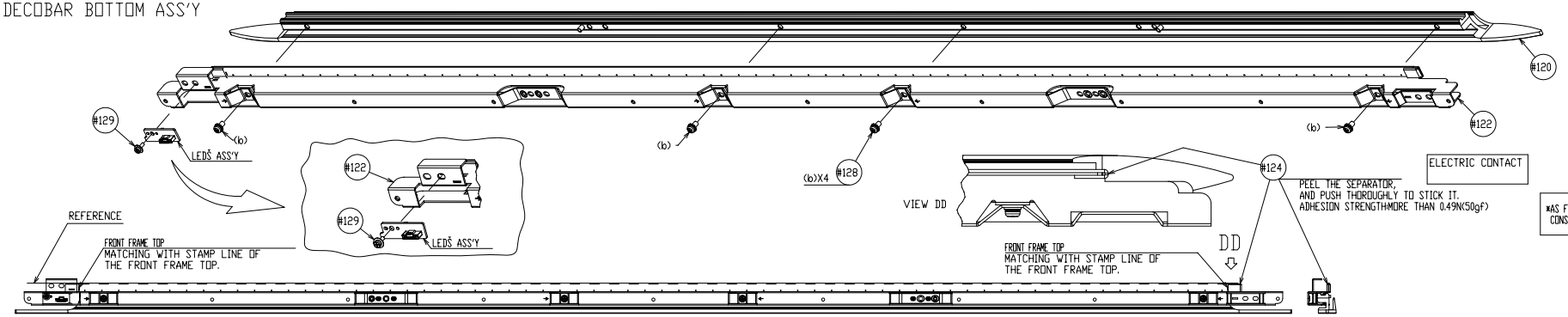


SYM.	P#	DESCRIPTION
#110	PM31201	AL DECO T H 55HDS69
#110	PM31202	AL DECO T HR 55HDT79
#110	PM31203	AL DECO T HDS 55HDX99
#112	NA82001	DW2 55 F FRAME TB
#114	MF02062	GASKET 10-3-1414 JIG
#118	MJ03618	SCREW M3M_4*12
#120	PM31211	AL DECO B HHR 55HDS69/HDT79
#120	PM31212	AL DECO B HDST 55HDX99
#122	NA82001	DW2 55 F FRAME TB
#124	MF02062	GASKET 10-3-1414 JIG
#128	MJ03618	SCREW M3M_4*12
#129	MJ03963	SCREW M3E 3*8
#150	MN07837	DW2 55 AIR FILTER TB
#152	MN07838	DW2 55 AIR FILTER S
#0800	KS21441K	36XF.FILTER 55HDS69/HDT79
#0800	KS2144CK	31XF.FILTER 55HDX99

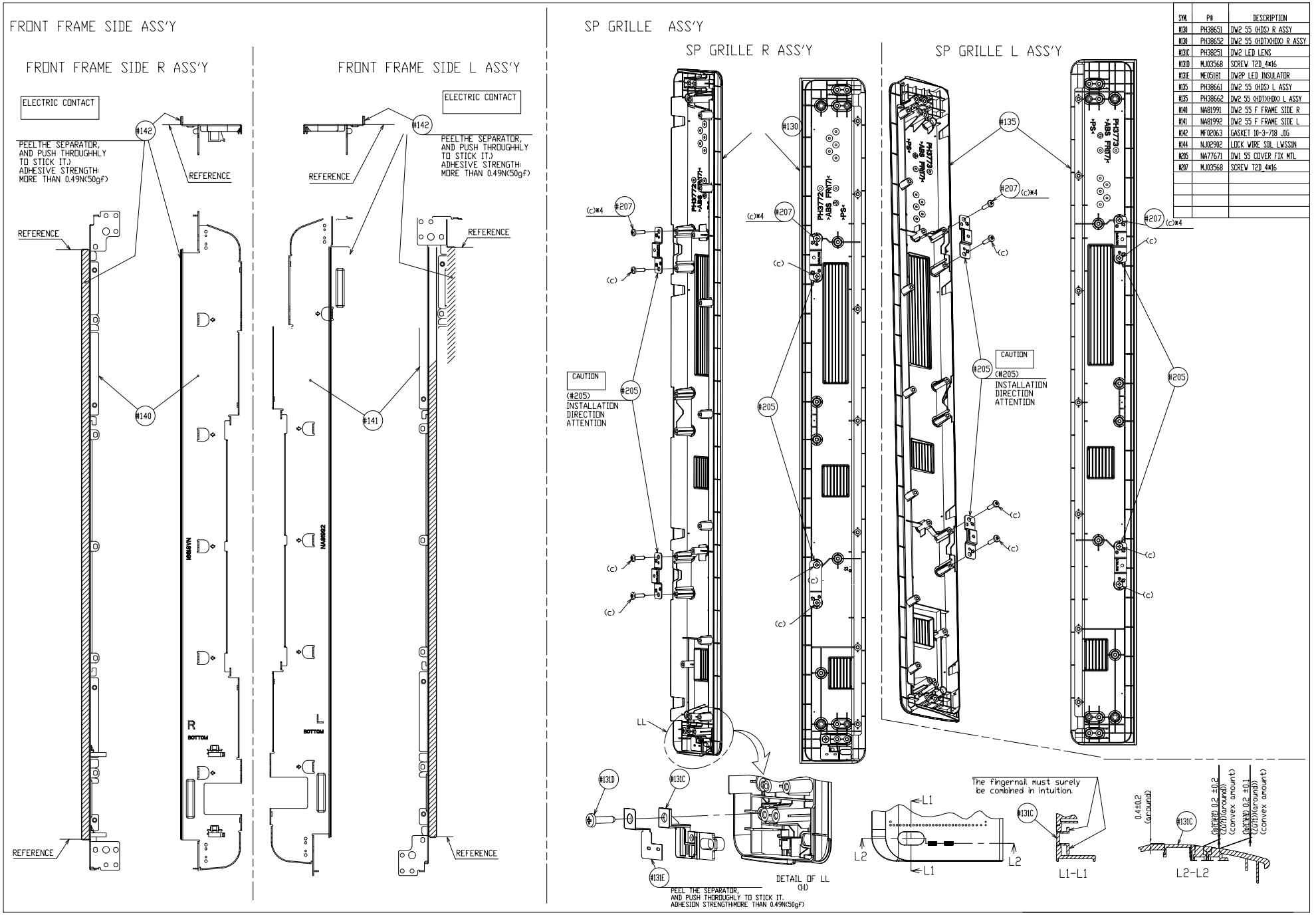
DECOBAR TOP ASS'Y



DECOBAR BOTTOM ASS'Y

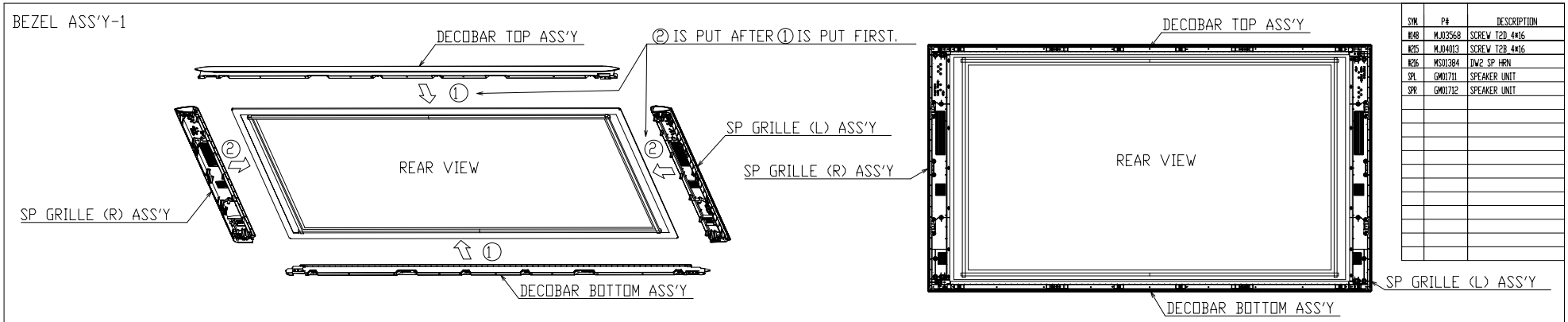


*AS FOR THIS PAGE, BY LIST CONSTITUTE NO. 100's



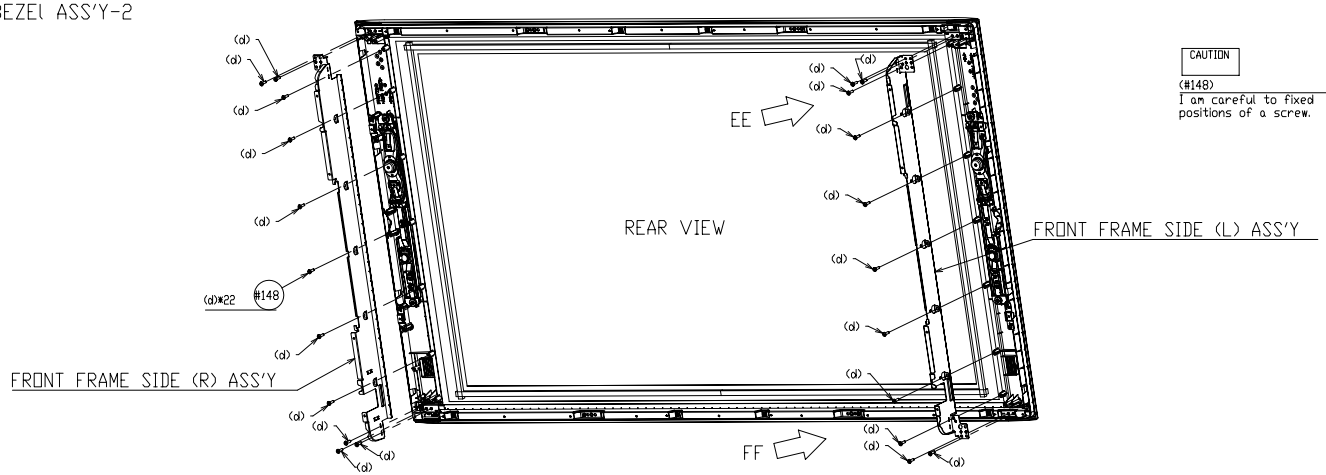
SYM	P#	DESCRIPTION
#130	PH38651	DW2 55 (HDS) R ASSY
#130	PH38652	DW2 55 (HDT)(HDX) R ASSY
#131C	PH38251	DW2 LED LENS
#131D	MJ03568	SCREW T2D,4×16
#131E	ME05181	DW2P LED INSULATOR
#135	PH38661	DW2 55 (HDS) L ASSY
#135	PH38662	DW2 55 (HDT)(HDX) L ASSY
#140	NA81991	DW2 55 F FRAME SIDE R
#141	NA81992	DW2 55 F FRAME SIDE L
#142	MF02063	GASKET 10-3-718 JIG
#144	NJ02902	LOCK WIRE SDL LWSSIN
#205	NA77671	DW1 55 COVER FIX MTL
#207	MJ03568	SCREW T2D,4×16

BEZEL ASS'Y-1

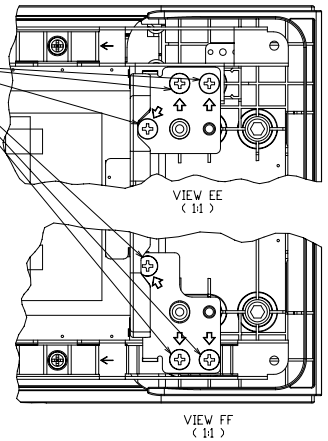


SYM	P#	DESCRIPTION
#148	MJ03568	SCREW T2D 4*16
#215	MJ04013	SCREW T2B 4*16
#216	MS01384	DW2 SP HRN
SPL	GM01711	SPEAKER UNIT
SPR	GM01712	SPEAKER UNIT

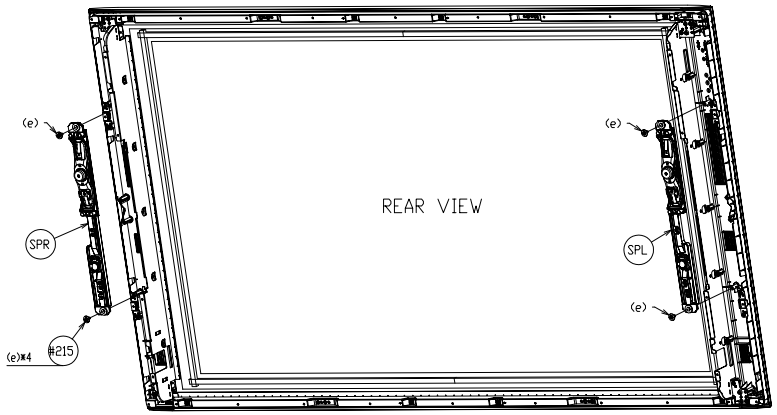
BEZEL ASS'Y-2



CAUTION
(#148)
I am careful to fixed positions of a screw.



BEZEL ASS'Y-3



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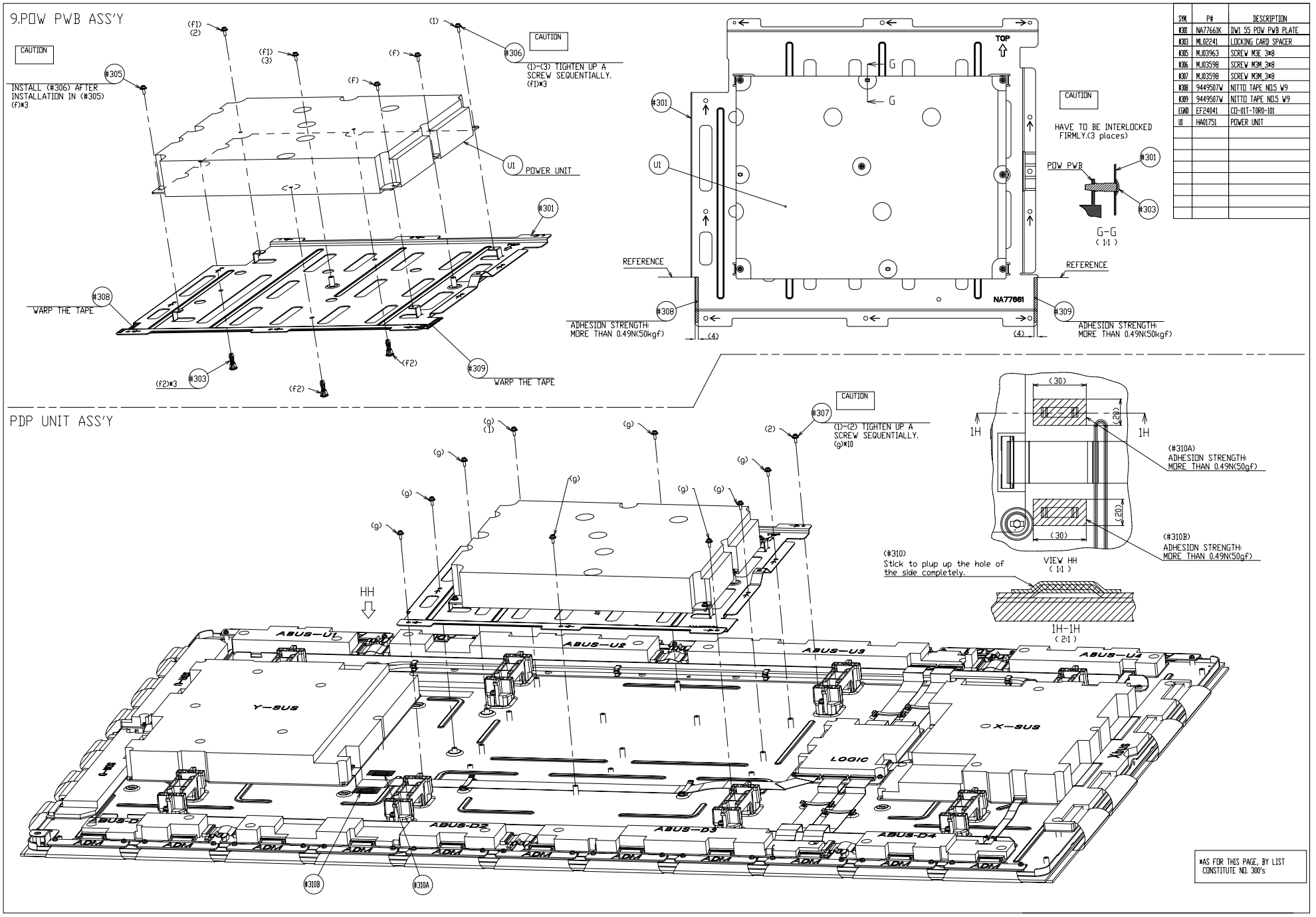
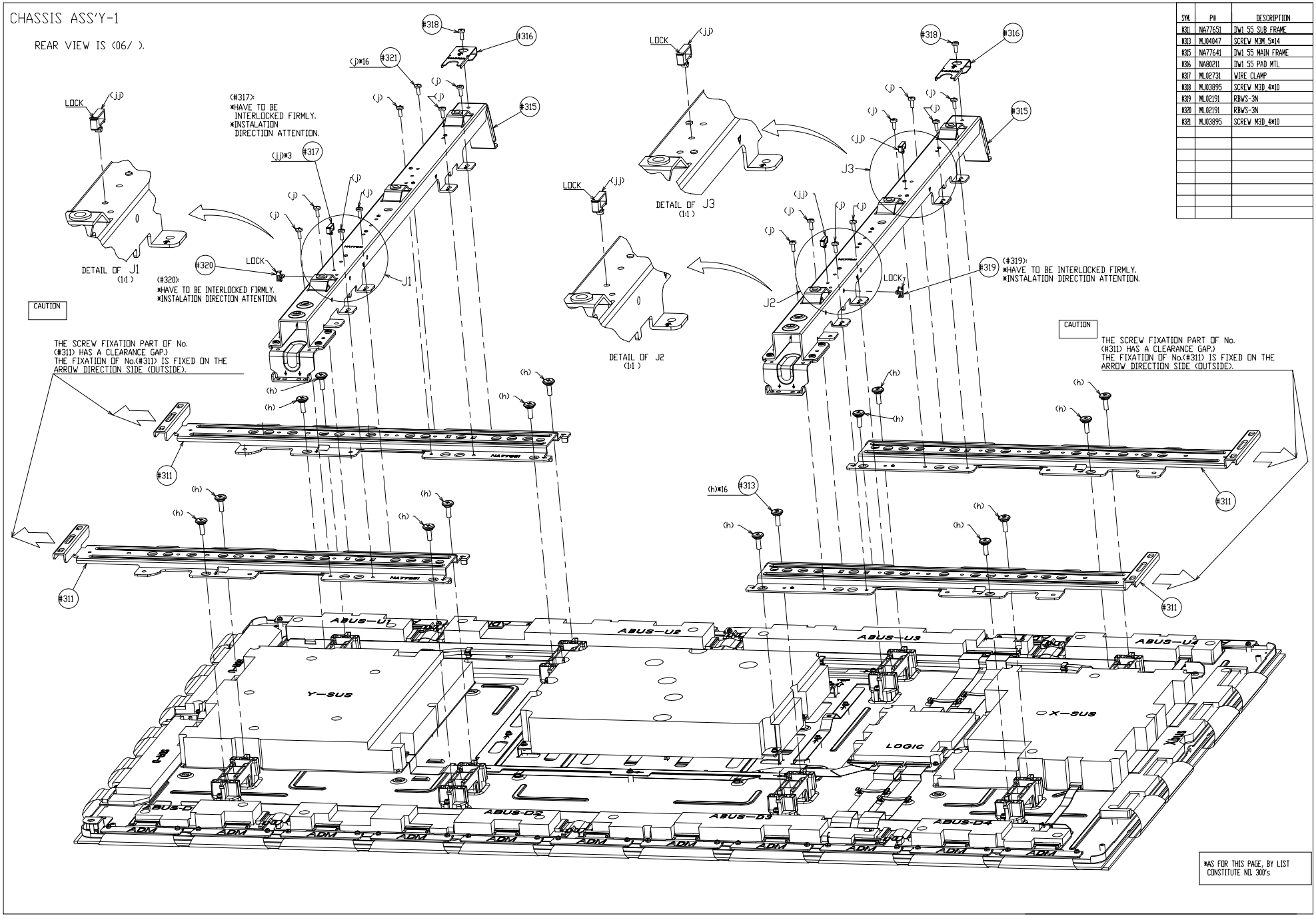
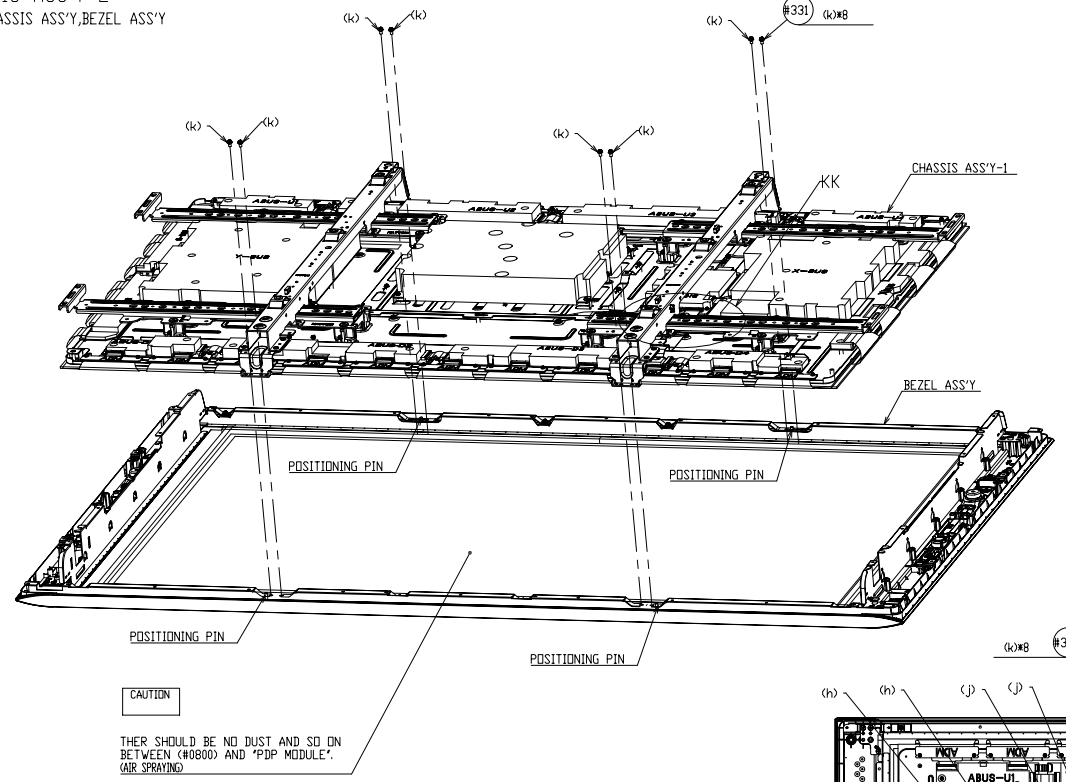

9.POW PWB ASS'Y
CAUTION
INSTALL (#306) AFTER INSTALLATION IN (#305) (f)*3
(#305)
(f1) (2)
(f1) (3)
(f)
(1)
(#306)
CAUTION
(1)~(3) TIGHTEN UP A SCREW SEQUENTIALLY. (f1)*3
U1
POWER UNIT
(#301)
(#308)
WARP THE TAPE
(f2)*3
(#303)
(f2)
(f2)
(#309)
WARP THE TAPE
TOP
G
G
(#301)
U1
REFERENCE
(#308)
ADHESION STRENGTH: MORE THAN 0.49N(50kgf)
NA77661
(4)
CAUTION
HAVE TO BE INTERLOCKED FIRMLY.(3 places)
POW PWB
(#301)
(#303)
G-G
(1:1)
REFERENCE
(#309)
ADHESION STRENGTH: MORE THAN 0.49N(50kgf)
(4)
SYM | P# | DESCRIPTION
(#301) | NA77661K | DW1 55 POW PWB PLATE
(#303) | M.02241 | LOCKING CARD SPACER
(#305) | M.03963 | SCREW M3E 3*8
(#306) | M.03598 | SCREW M3M 3*8
(#307) | M.03598 | SCREW M3M 3*8
(#308) | 9449507W | NITTO TAPE NO.5 W9
(#309) | 9449507W | NITTO TAPE NO.5 W9
EQ#0 | EF24041 | CD-01T-TORO-101
U1 | HA01751 | POWER UNIT
PDP UNIT ASS'Y
CAUTION
(#307)
(1)~(2) TIGHTEN UP A SCREW SEQUENTIALLY. (g)*10
(g)
(1)
(2)
HH
ABUS-U1
ABUS-U2
ABUS-U3
ABUS-U4
Y-SUS
X-SUS
LOGIC
ABUS-D1
ABUS-D2
ABUS-D3
ABUS-D4
ADM
(#310B)
(#310A)
(30)
(20)
1H
(#310A)
ADHESION STRENGTH: MORE THAN 0.49N(50gf)
(#310B)
ADHESION STRENGTH: MORE THAN 0.49N(50gf)
(#310)
Stick to plup up the hole of the side completely.
VIEW HH
(1:1)
1H-1H
(2:1)
*AS FOR THIS PAGE, BY LIST CONSTITUTE NO. 300's



SYM	P#	DESCRIPTION
#301	NA77651	DW1 55 SUB FRAME
#303	MJ04047	SCREW M3M_5*14
#305	NA77641	DW1 55 MAIN FRAME
#306	NA80211	DW1 55 PAD MTL
#307	ML02731	WIRE CLAMP
#308	MJ03895	SCREW M3D_4*10
#309	ML02191	RBWS-3N
#320	ML02191	RBWS-3N
#321	MJ03895	SCREW M3D_4*10

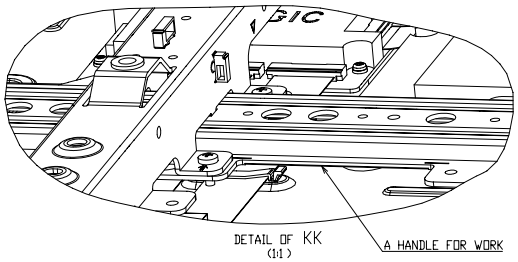
CHASSIS ASS'Y-2

CHASSIS ASS'Y,BEZEL ASS'Y

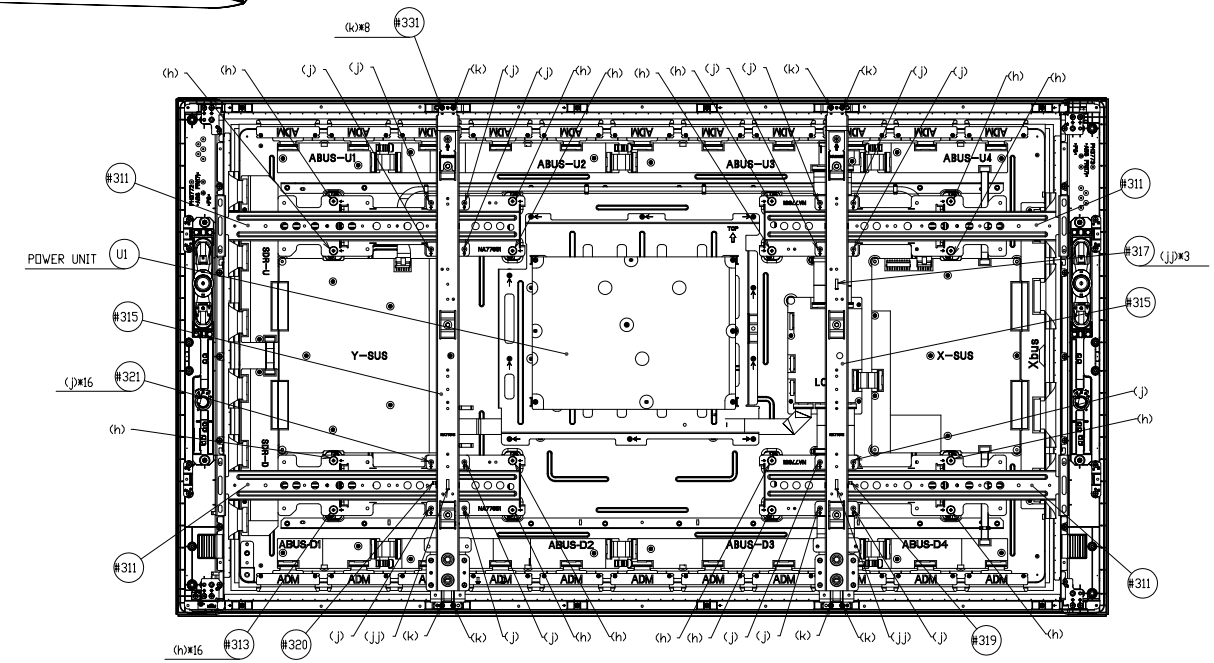


CAUTION

THER SHOULD BE NO DUST AND SO ON BETWEEN (#0800) AND 'PDP MODULE'. (AIR SPRAYING)



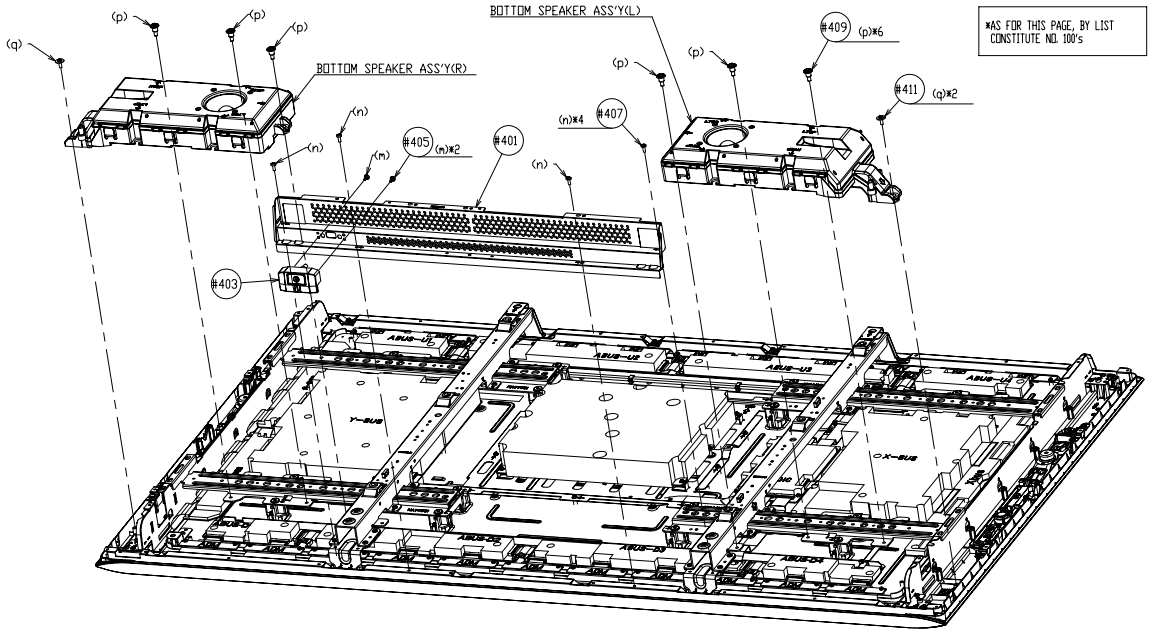
SYM	P#	DESCRIPTION
#301	NA77651	DW1 55 SUB FRAME
#303	MJ04047	SCREW M3M_5×14
#305	NA77641	DW1 55 MAIN FRAME
#307	ML02731	WIRE CLAMP
#309	ML02191	RBWS-3N
#320	ML02191	RBWS-3N
#321	MJ03895	SCREW M3D_4×10
#331	MJ03618	SCREW M3M_4×12
U1	HA01751	POWER UNIT



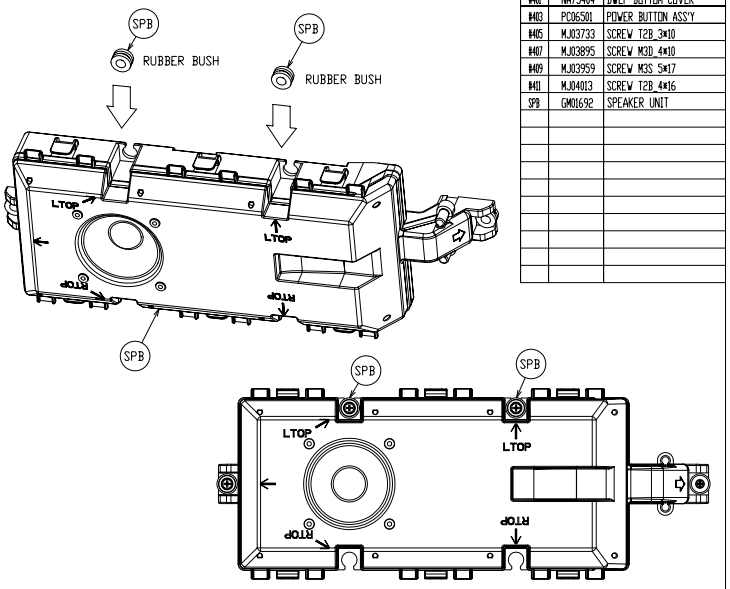
CHASSIS ASS'Y-1,2
(REAW VIEW)

*AS FOR THIS PAGE, BY LIST CONSTITUTE NO. 300's

CHASSIS ASS'Y-3



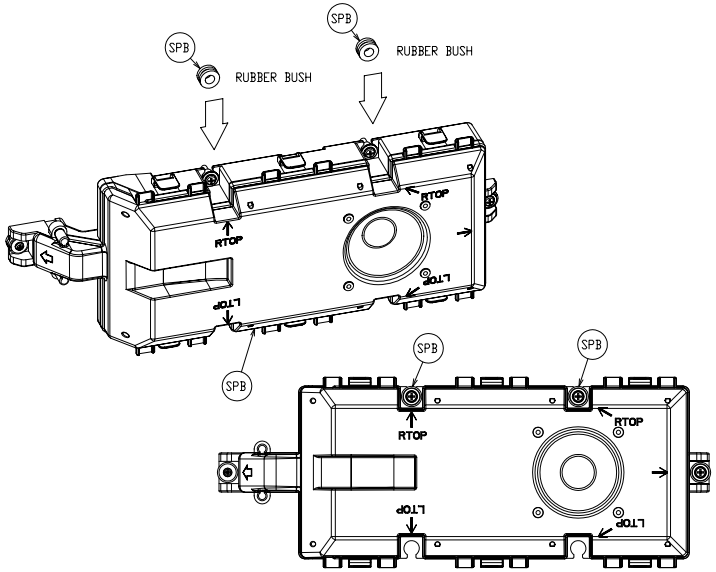
BOTTOM SPEAKER ASS'Y (L)



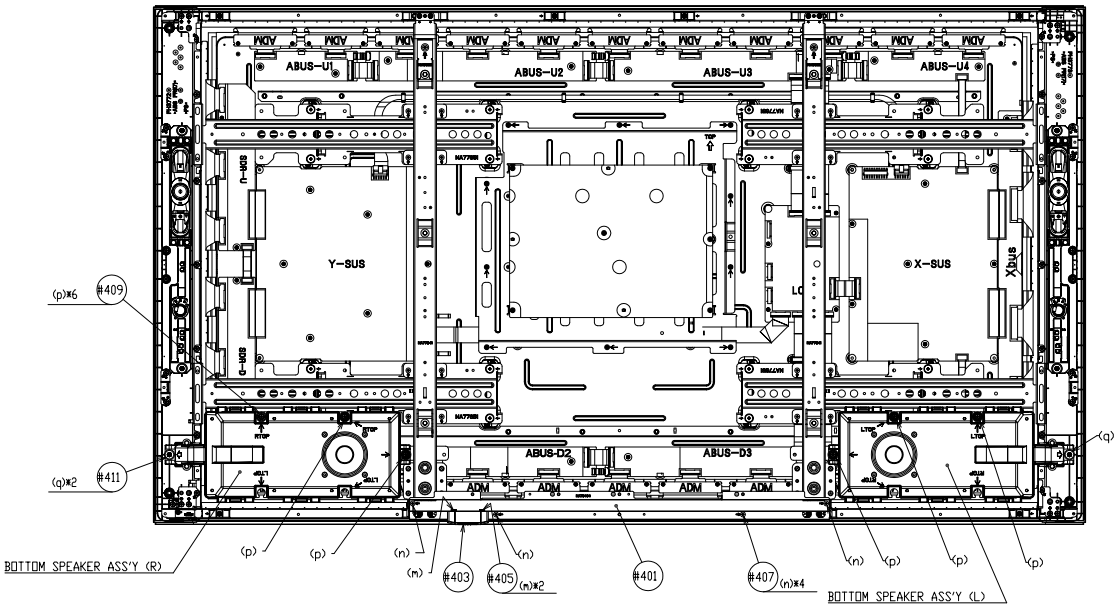
Attached rubber bush is interlocked firmly.

SYM.	P#	DESCRIPTION
#401	NA75404	DW2P BOTTOM COVER
#403	PC06501	POWER BUTTON ASS'Y
#405	MJ03733	SCREW T2B_3*10
#407	MJ03895	SCREW M3D_4*10
#409	MJ03959	SCREW M3S_5*17
#411	MJ04013	SCREW T2B_4*16
SPB	GM01692	SPEAKER UNIT

BOTTOM SPEAKER ASS'Y (R)

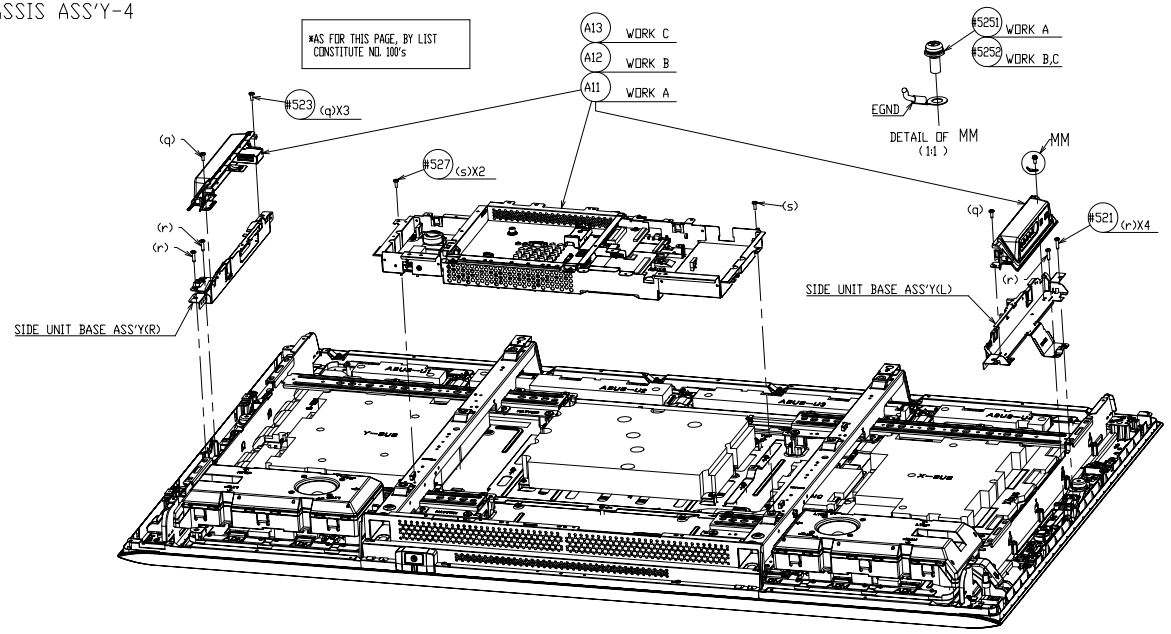


Attached rubber bush is interlocked firmly.

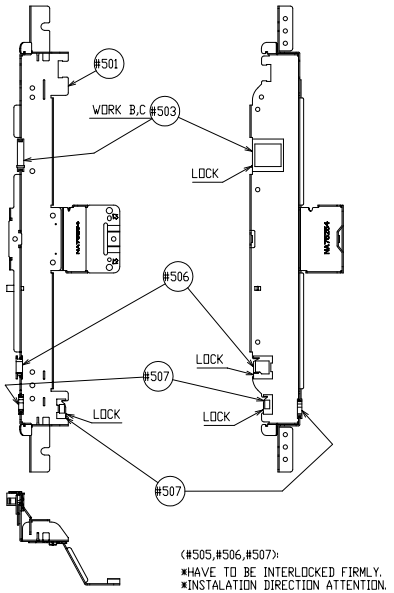


CHASSIS ASS'Y-3
(REAR VIEW)

CHASSIS ASS'Y-4



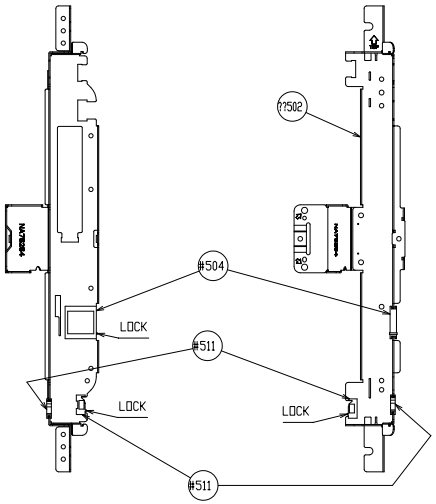
SIDE UNIT BASE ASS'Y (L)



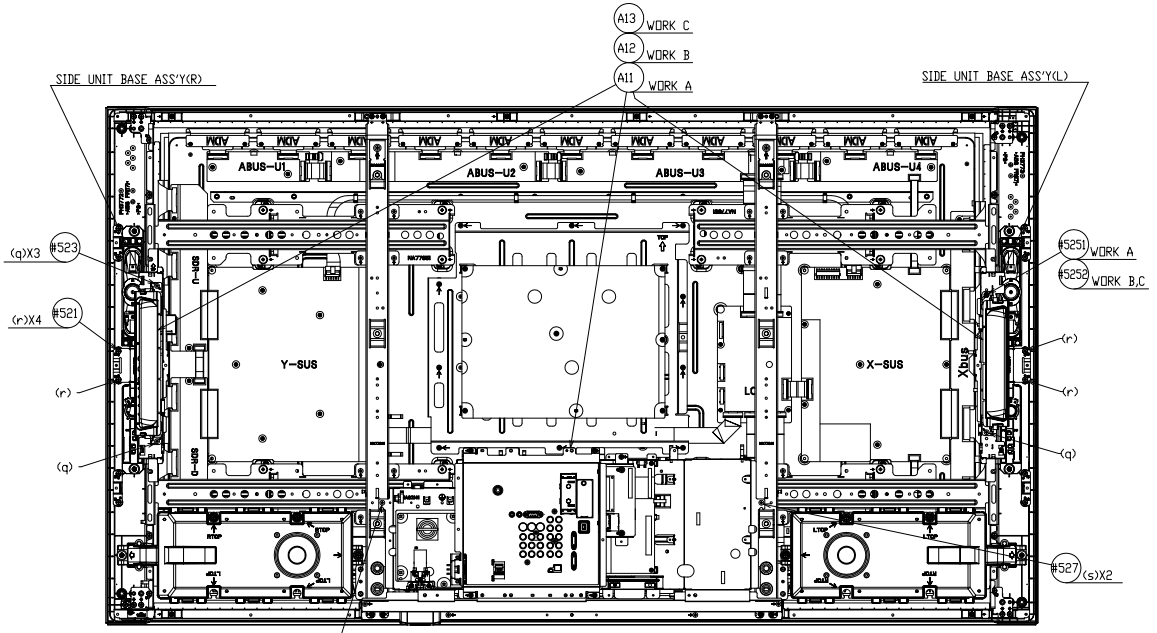
(#505,#506,#507):
*HAVE TO BE INTERLOCKED FIRMLY.
*INSTALATION DIRECTION ATTENTION.

SYM	P#	DESCRIPTION
#500	NA75252	DW1 55 SIDEUNIT BASE
#502	NA75254	DW2 55 SIDEUNIT BASE
#503	ML02061	EDG SADDLE 1720L
#504	ML02061	EDG SADDLE 1720L
#506	ML01081	WIRE CLAMP
#507	ML01082	WIRE CLAMP
#508	MF02024	GASKET 6-1-265 JIG
#511	ML01082	WIRE CLAMP
#521	MJ03568	SCREW T2D 4*16
#523	MJ03895	SCREW M3D 4*10
#5251	MJ03895	SCREW M3D 4*10
#5252	MJ04039	SCREW M3E 4*10
#527	MJ04039	SCREW M3E 4*10
EGND	EF24041	CD-01T-TORO-101
A11	UE26054	DW2D CHASSIS ASSY
A12	UE26055	DW2E CHASSIS ASSY
A13	UE26056	DW2F CHASSIS ASSY

SIDE UNIT BASE ASS'Y (R)



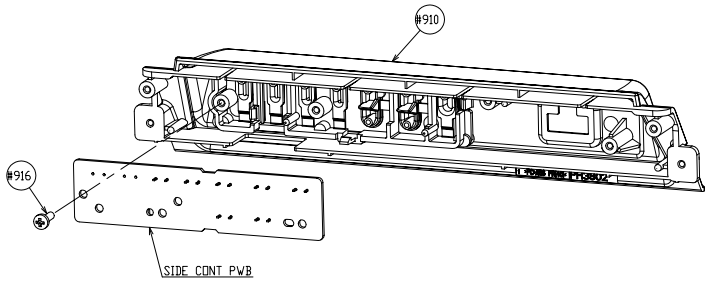
(#511):
*HAVE TO BE INTERLOCKED FIRMLY.
*INSTALATION DIRECTION ATTENTION.



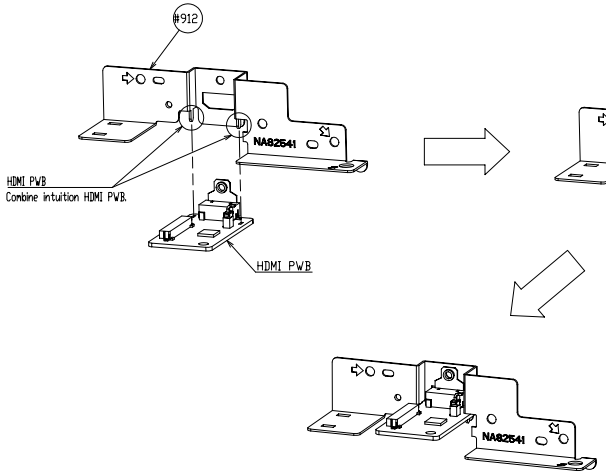
CHASSIS ASS'Y-4
(REAR VIEW)

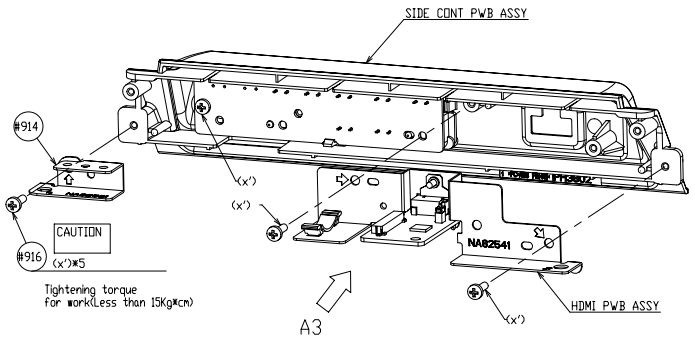
SIDE CONT UNIT ASS'Y

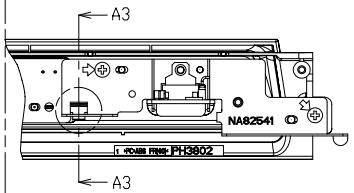
SIDE CONT PWB ASSY



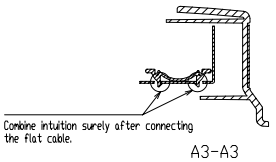
HDMI PWB ASSY

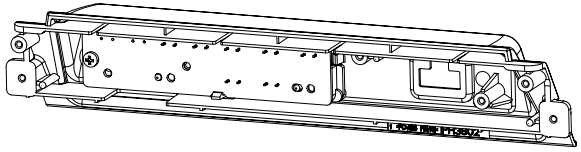


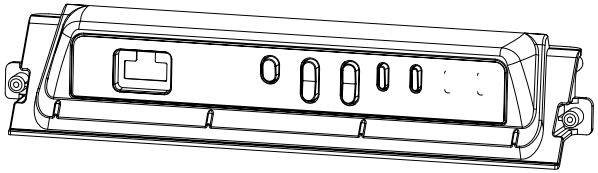




VIEW A3



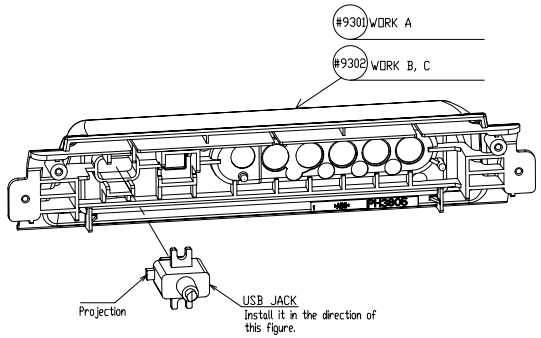




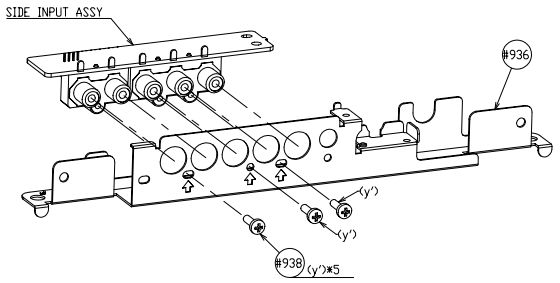
SYM.	P#	DESCRIPTION
#938L	PH38055	SIDE INPUT CASE HDS
#938Z	PH38056	SIDE INPUT CASE HDT,HDX
#938	NA82561	DW2 SIDE INPUT BKT U
#942	ML01252	WIRE CLAMP

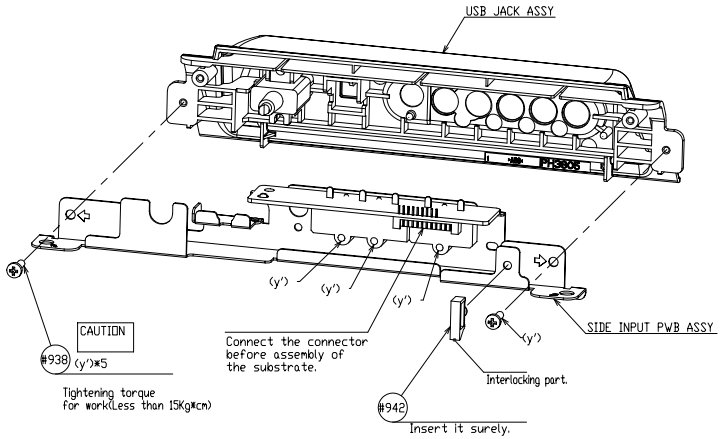
SIDE INPUT UNIT ASS'Y

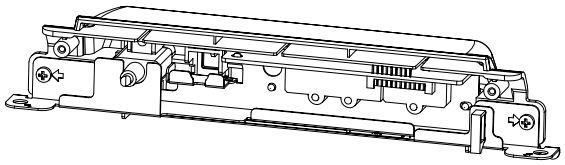
USB JACK ASSY

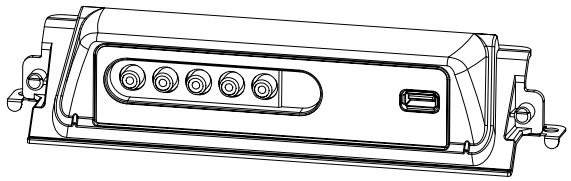


SIDE INPUT PWB ASSY







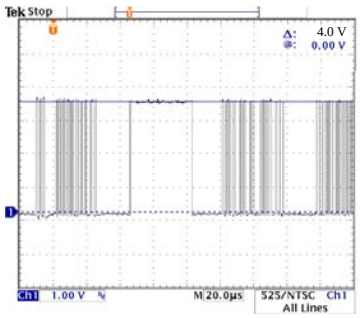


SYM.	P#	DESCRIPTION
#901	PH38024	DW2 SIDE CONTROL CASE
#902	PC06751	DW2 CONTROL KEY
#92	NA82541	DW2 HDMI HOLD MTL
#94	NA82531	DW2 SIDE CONT BRKT
#96	MJ03733	SCREW T2B 3*10
#98	MJ03963	SCREW M3E 3*8
#920	ML02021	FLAT CLAMPER 15

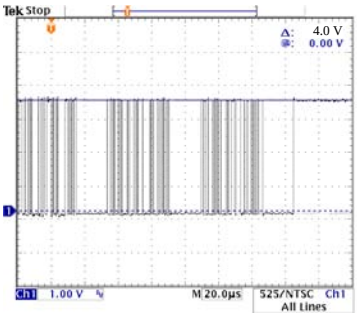
WAVEFORMS

Numbers inside circle correspond to locations shown in the circuit diagram. Waveforms taken using a Color Bar signal with H sync 31 khz and V. sync 60 hz and a X10 probe.
Signal amplitude and DC level shown at Δ and @ respectively.

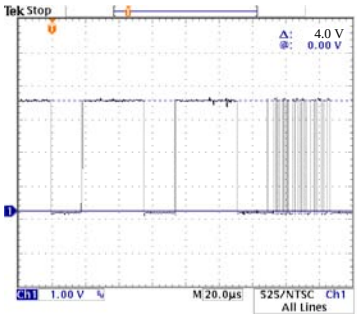
1 IT02 Pin 41 MPEG-DATA 0



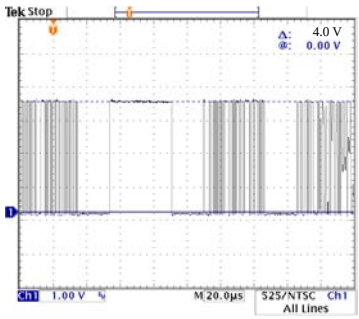
2 IT02 Pin 42 MPEG-DATA 1



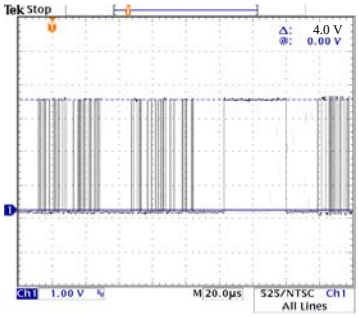
3 IT02 Pin 47 MPEG-DATA 2



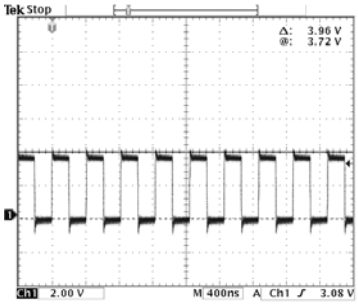
4 IT02 Pin 48 MPEG-DATA 3



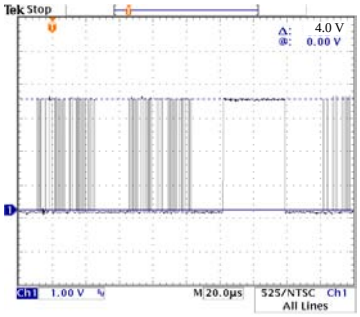
5 IT02 Pin 50 MPEG-DATA 4



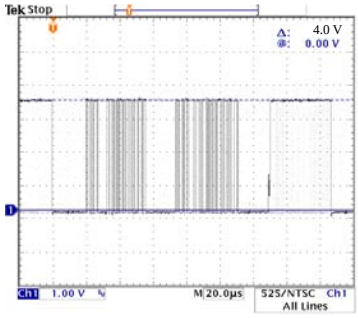
6 IT02 Pin 51 MPEG-CLK



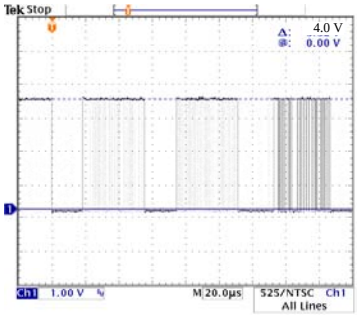
7 IT02 Pin 54 MPEG-DATA 5



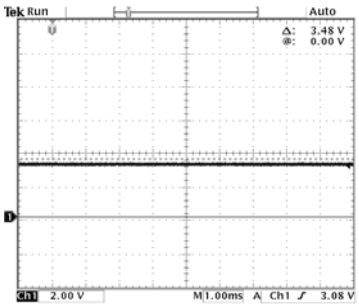
8 IT02 Pin 57 MPEG-DATA 6



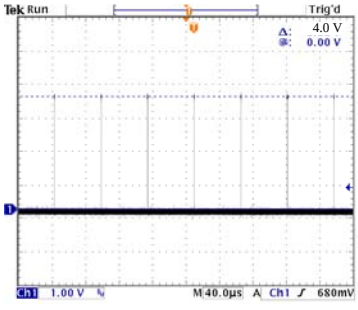
9 IT02 Pin 59 MPEG-DATA 7/SER_DATA



10 IT02 Pin 63 MPEG_DATA EN



11 IT02 Pin 66 MPEG_PKT_SYNC



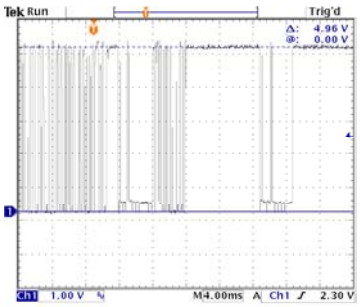
SUBDIGITAL PWB
QAM/VSB DEMODULATOR

click here to go to circuit diagram

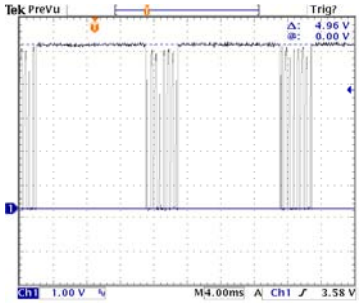
WAVEFORMS

Numbers inside circle correspond to locations shown in the circuit diagram. Waveforms taken using a Color Bar signal with H sync 31 khz and V. sync 60 hz and a X10 probe.
Signal amplitude and DC level shown at Δ and @ respectively.

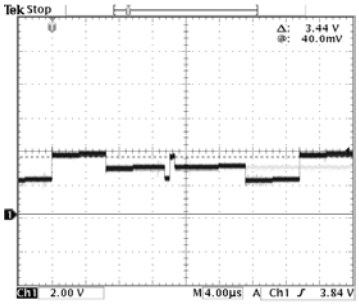
(12) I001 Pin 44 DATA



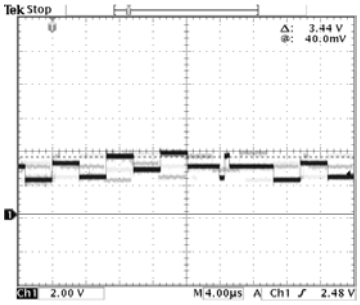
(13) I001 Pin 45 CLK



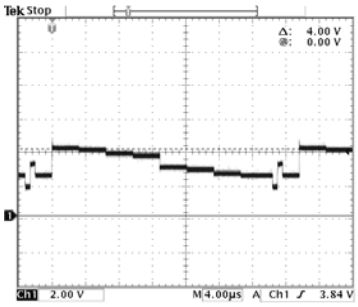
(14) I001 Pin 30 P_R OUT 1



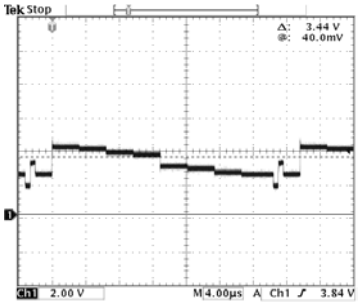
(15) I001 Pin 29 P_B OUT 1



(16) I001 Pin 28 Y OUT



(17) I001 Pin 32 SUB/Y/V OUT



SUBDIGITAL PWB
I001 AV SWITCH

click here to go to circuit diagram

DC VOLTAGES

(55" Models only)

Symbol	Pin No.	Voltage
CN63	1	5.4
	2	0
	3	3.3
	4	0.1
	5	3.8
	6	5.3
	7	3.3
	8	3.3

Symbol	Pin No.	Voltage
CN64	1	60
	2	60
	3	5.1
	4	5.1
	5	0
	6	0
	7	0
	8	80
	9	80
	10	80

Symbol	Pin No.	Voltage
CN68	1	NC
	2	3.1
	3	3.1
	4	2.2
	5	1.6
	6	0
	7	0
	8	0
	9	3.3
	10	5.1
	11	5.1

Symbol	Pin No.	Voltage
CNPPS	1	5.7
	2	5.7
	3	5.7
	4	0
	5	0
	6	0
	7	10.8
	8	0
	9	17
	10	0
	11	0
	12	0
	13	12
	14	12
	15	12

Symbol	Pin No.	Voltage
PTF	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	2.1
	8	2.1
	9	0
	10	0
	11	0
	12	0
	13	9

Symbol	Pin No.	Voltage
PFA1	1	NC
	2	0
	3	0

Symbol	Pin No.	Voltage
PCM1	1	0
	2	4.3
	3	0
	4	4
	5	5
	6	5
	7	5.8
	8	0
	9	0
	10	3.3
	11	0

Symbol	Pin No.	Voltage
PCM2	1	0
	2	5
	3	5
	4	5
	5	0

Symbol	Pin No.	Voltage
PSPK	1	5.3
	2	5.3
	3	5.5
	4	5.5
	5	5.3
	6	5.3
	7	5.4
	8	5.4

Symbol	Pin No.	Voltage
PFA2	1	NC
	2	0
	3	0

Symbol	Pin No.	Voltage
P401	1	0
	2	0

TABLE OF CONTENTS

DC VOLTAGES

(55" Models only)

Symbol	Pin No.	Voltage
IT05	1	3.3
	2	0
	3	1.3
	4	5
	5	5.8

Symbol	Pin No.	Voltage
IT11	1	4
	2	0
	3	1.3
	4	1.8
	5	3.3

Symbol	Pin No.	Voltage
IT12	1	2
	2	0
	3	1.3
	4	3.3
	5	5.8

Symbol	Pin No.	Voltage
IW02	1	0
	2	5.8
	3	0
	4	0
	5	0.15

Symbol	Pin No.	Voltage
IW03	1	1.2
	2	0
	3	0
	4	0.3
	5	2.5
	6	0
	7	0
	8	2.5

Symbol	Pin No.	Voltage
IWP2	1	3.3
	2	0
	3	1.2
	4	3.3
	5	5.8

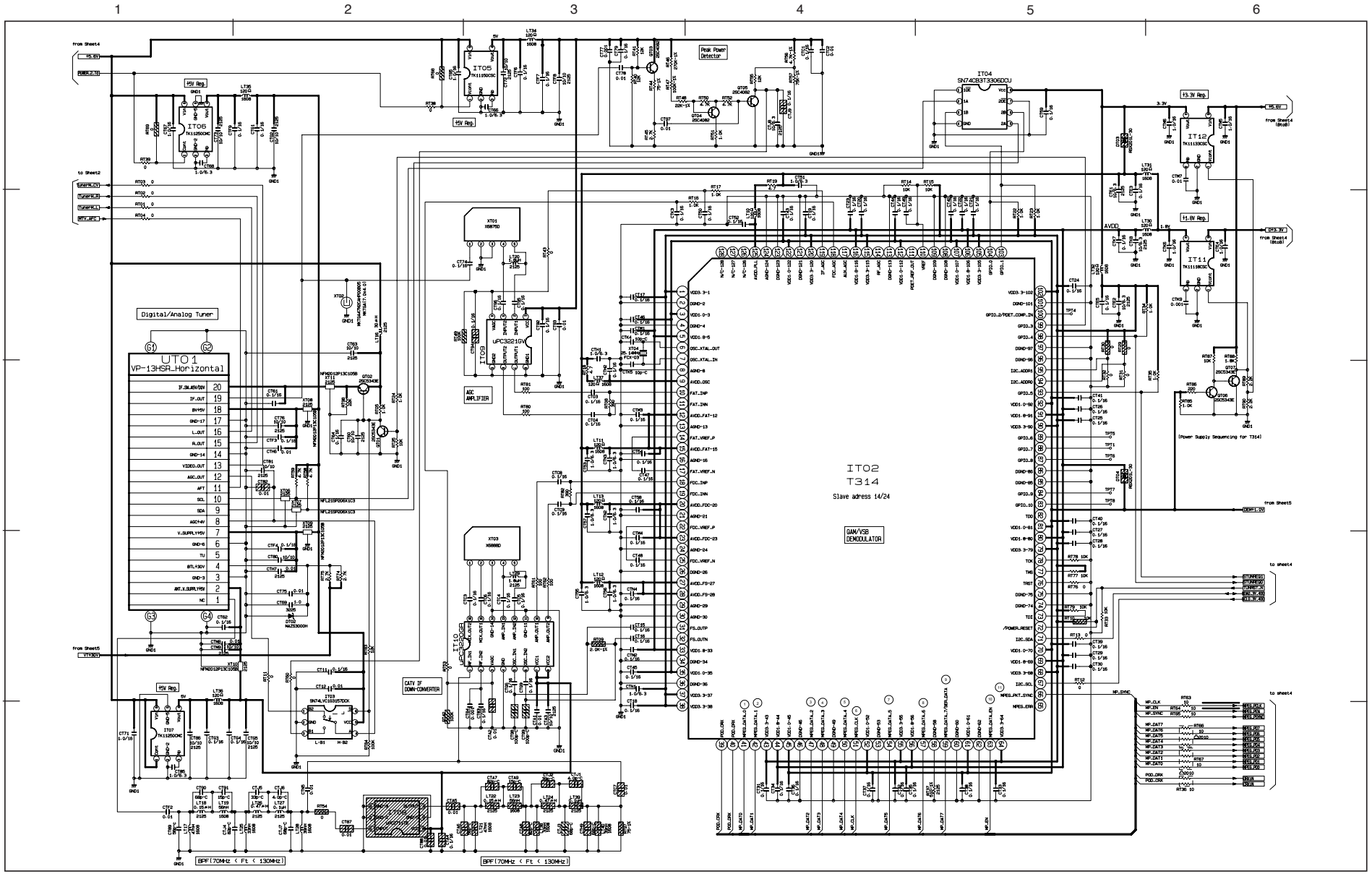
Symbol	Pin No.	Voltage
IWP1	1	2.3
	2	5.8
	3	5.8
	4	0
	5	0.5
	6	0
	7	3.3
	8	3.3
	9	0
	10	0

Symbol	Pin No.	Voltage
IW04	1	3.3
	2	0
	3	1.2
	4	2.5
	5	3.3

Symbol	Pin No.	Voltage
UT01	1	0
	2	5
	3	0
	4	1.7
	5	2.3
	6	0
	7	5
	8	1.9
	9	4.8
	10	4.8
	11	2.8
	12	1.9
	13	2.2
	14	0
	15	2.2
	16	2.2
	17	0
	18	5
	19	0
	20	5

BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



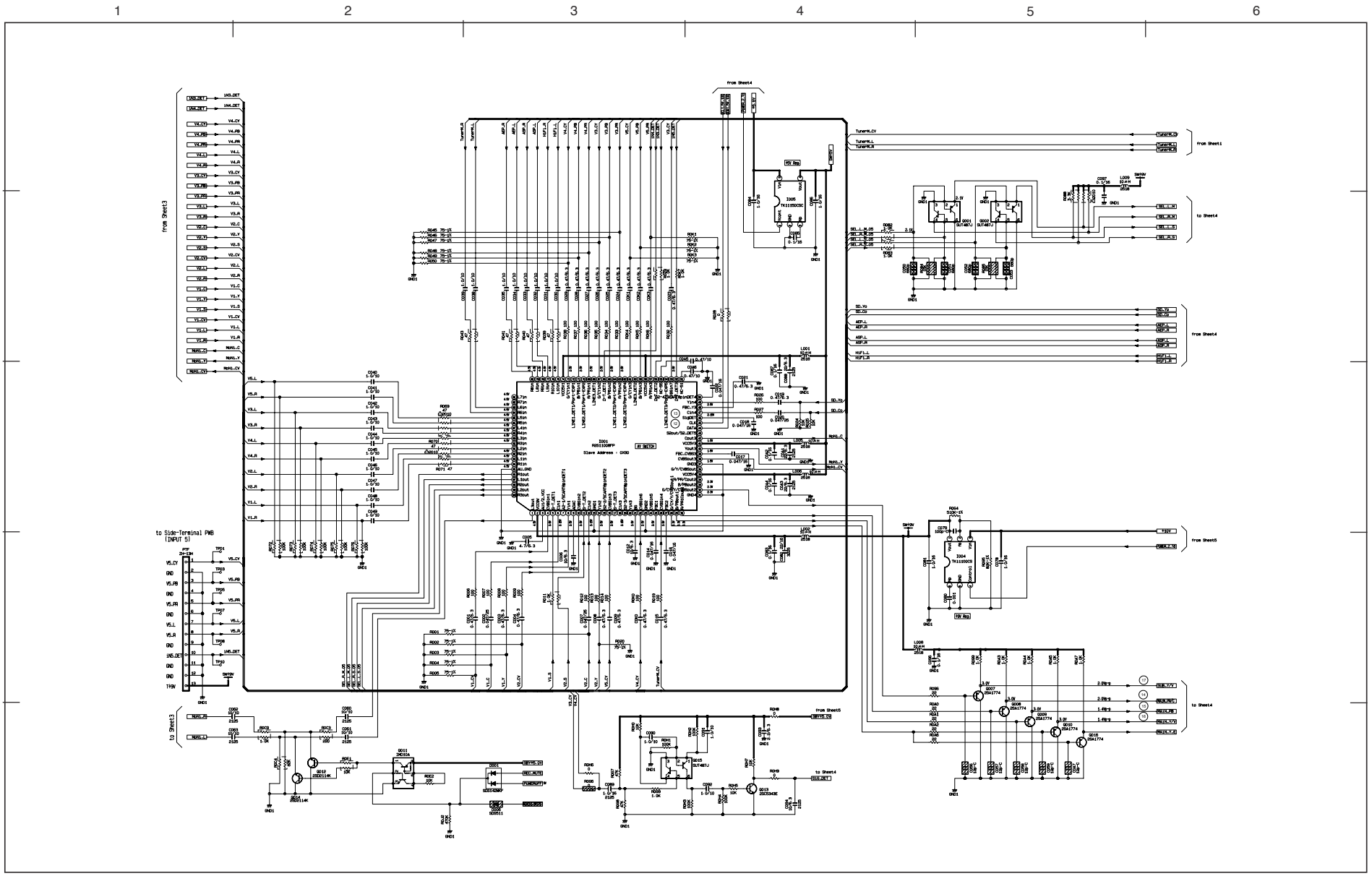
- All DC voltage to be measured with a tester (100 kΩ/V). Voltage taken on a complex color bar including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

TUNER/DEMOD

TABLE OF CONTENTS

BASIC CIRCUIT DIAGRAM

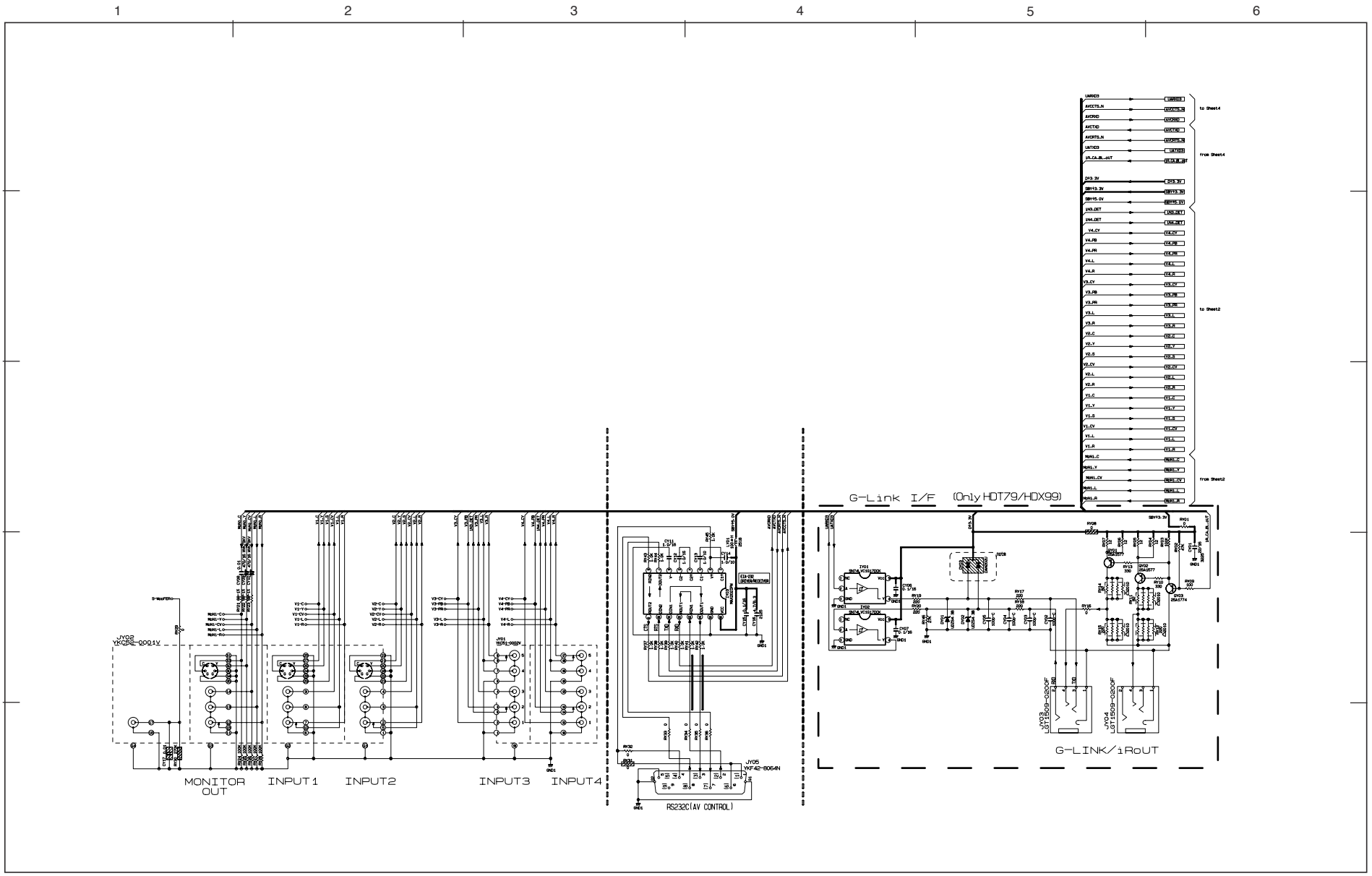
PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



- All DC voltage to be measured with a tester (100 kΩ/V). Voltage taken on a complex color bar including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

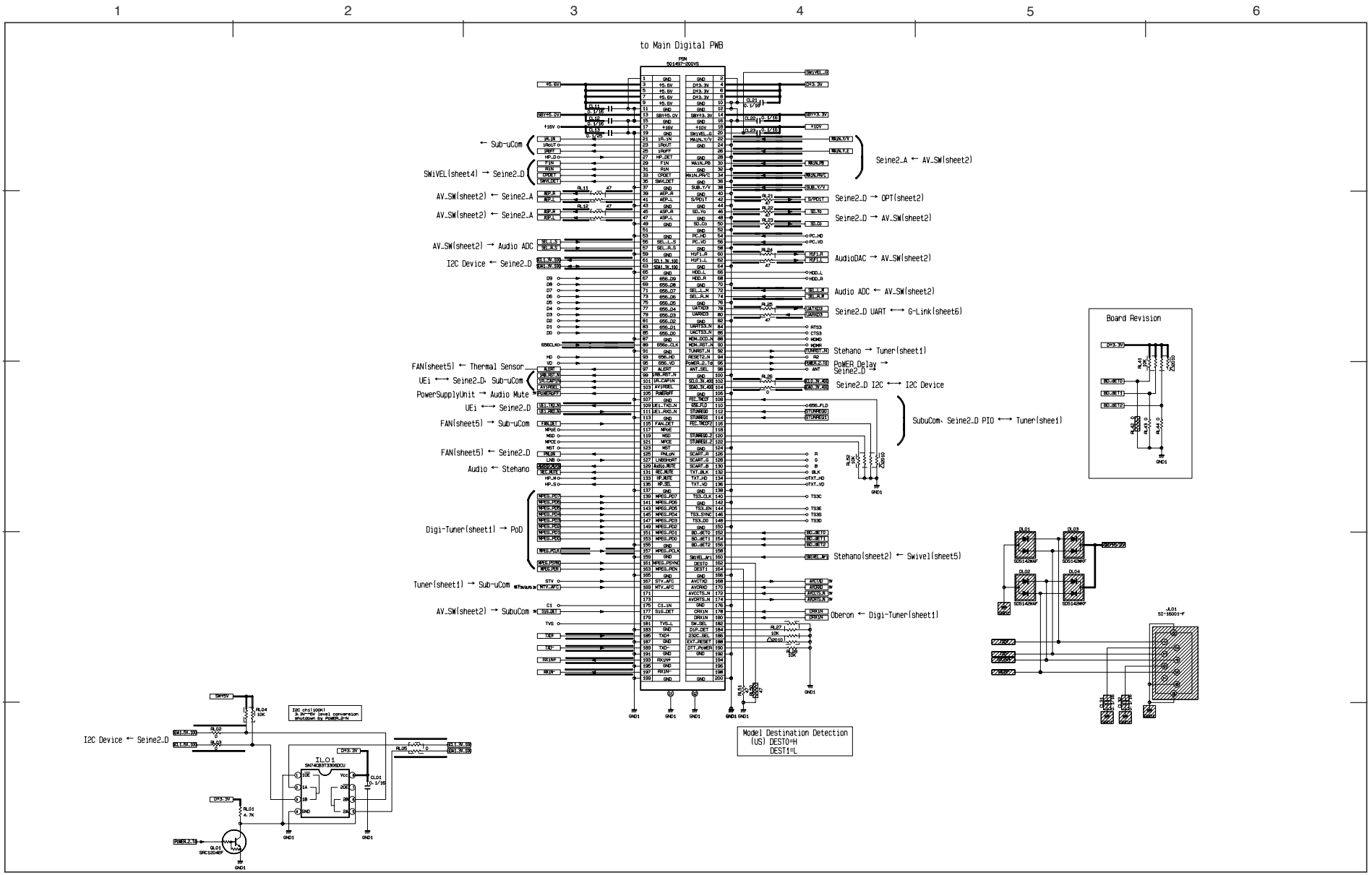


TERMINAL

- All DC voltage to be measured with a tester (100 kΩ/V). Voltage taken on a complex color bar including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

BASIC CIRCUIT DIAGRAM

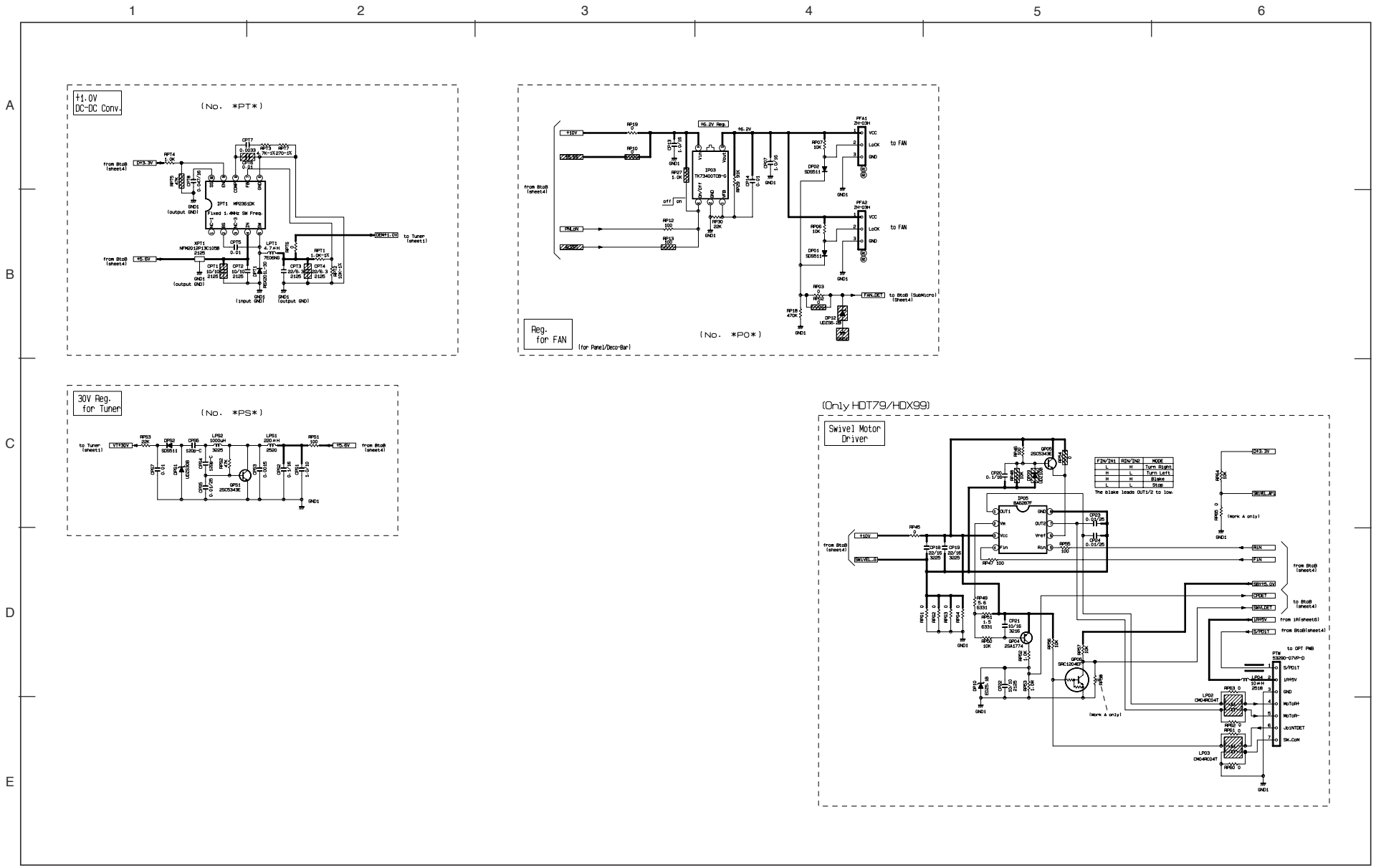
PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



- All DC voltage to be measured with a tester (100 kΩ/V). Voltage taken on a complex color bar including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

BASIC CIRCUIT DIAGRAM

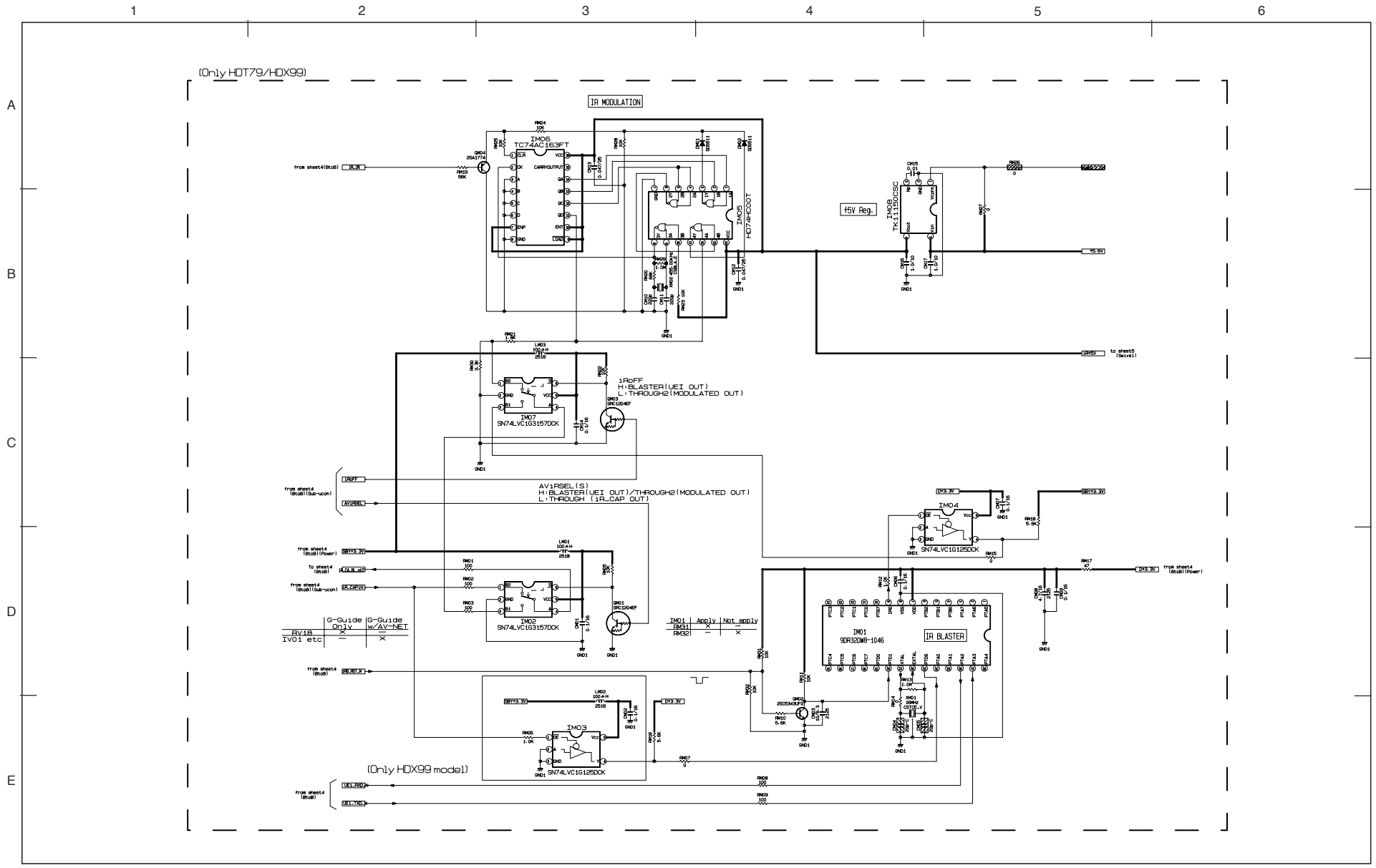
PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



- All DC voltage to be measured with a tester (100 kΩ/V). Voltage taken on a complex color bar including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

BASIC CIRCUIT DIAGRAM

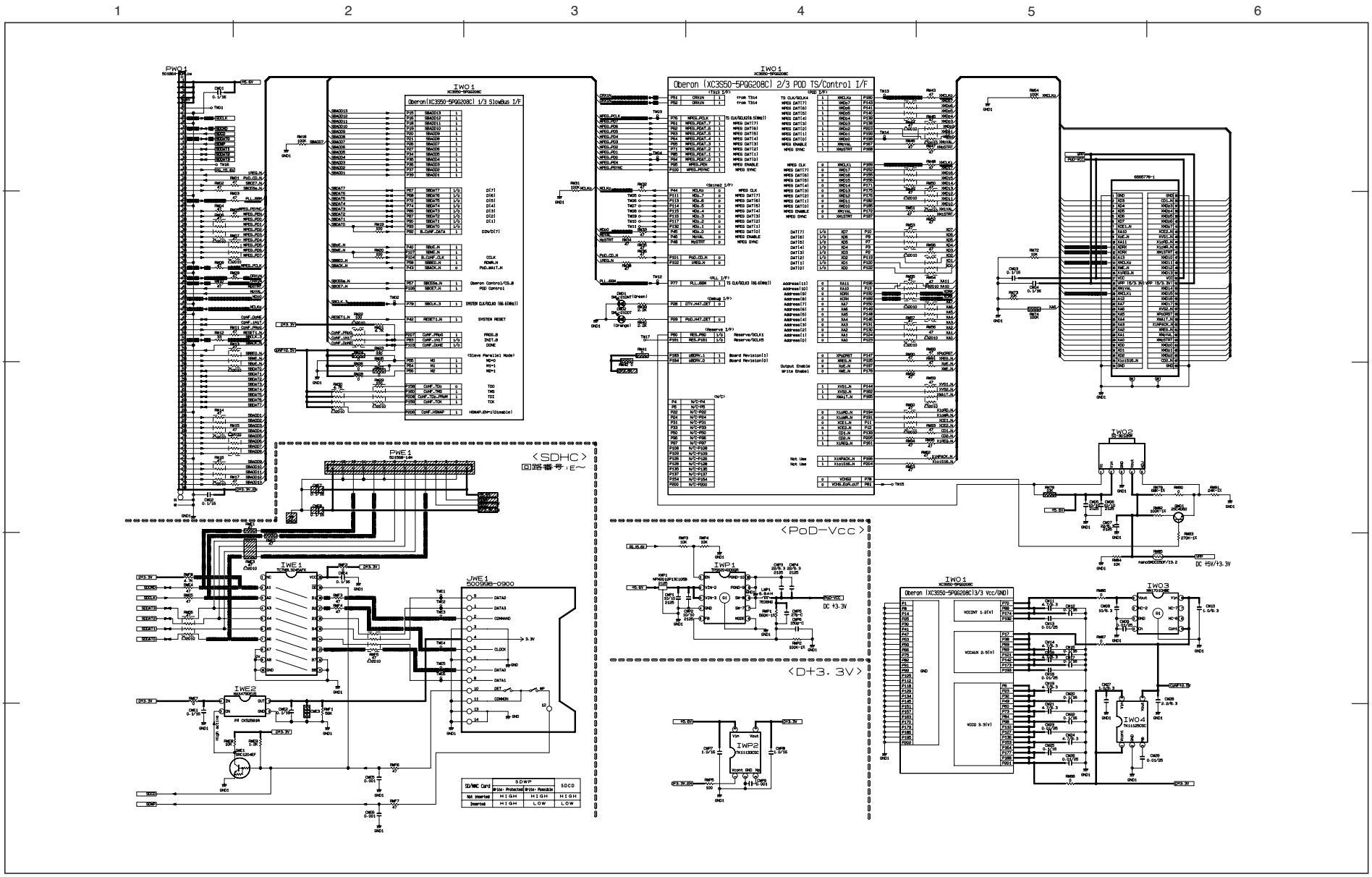
PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



- All DC voltage to be measured with a tester (100 kΩ/V). Voltage taken on a complex color bar including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

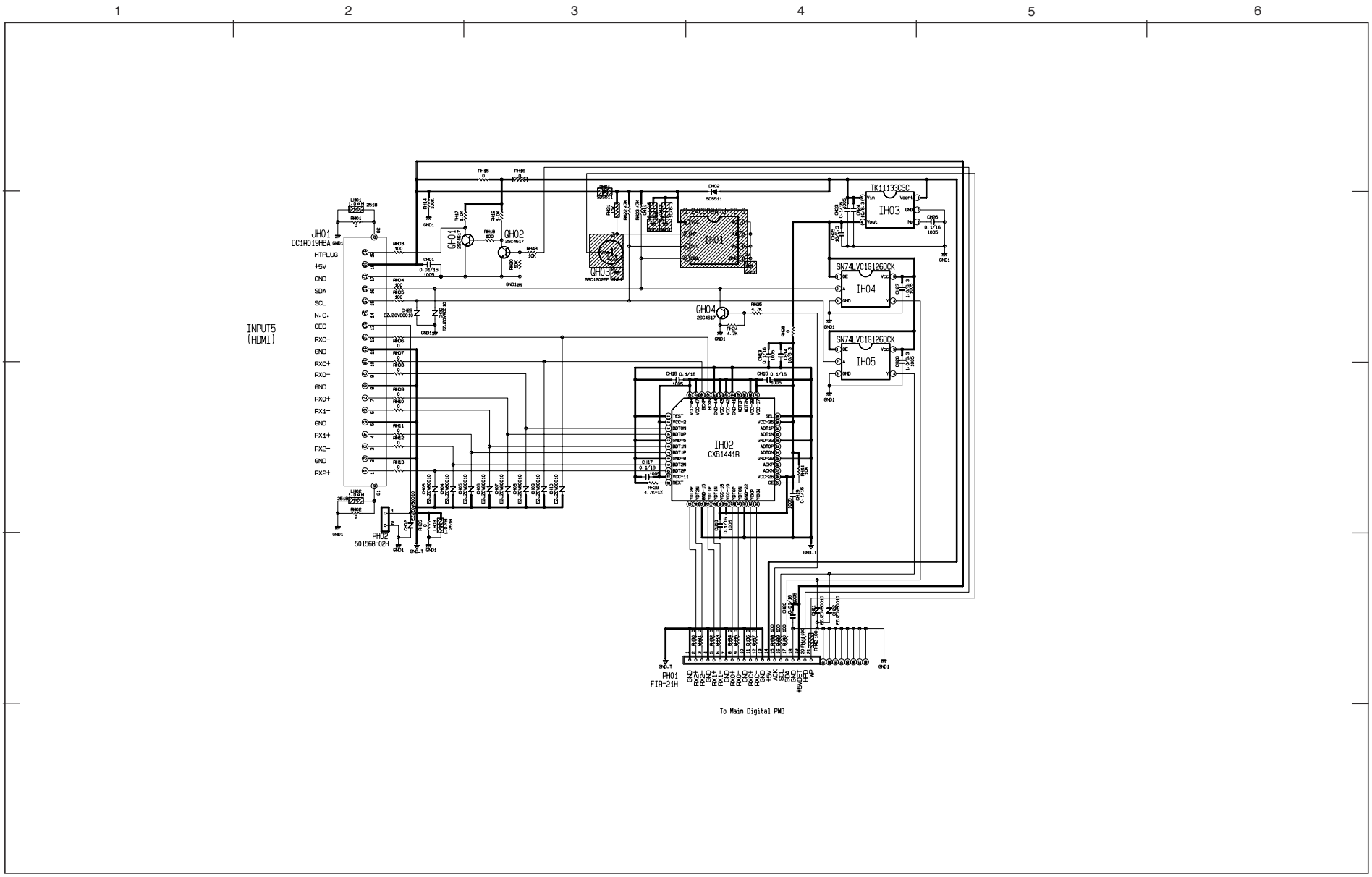


POD

- All DC voltage to be measured with a tester (100 kΩ/V). Voltage taken on a complex color bar including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

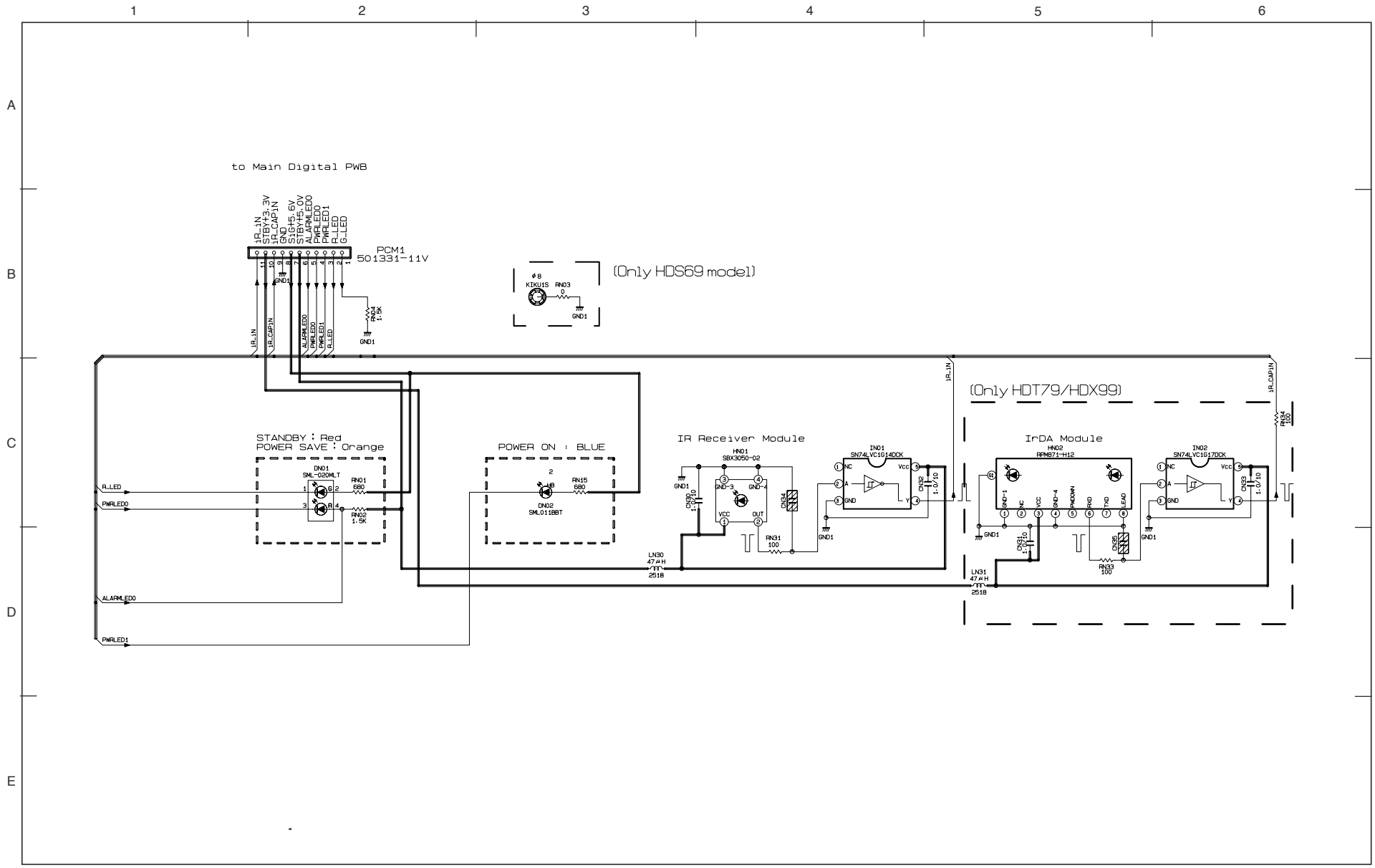


FRONT HDMI

- All DC voltage to be measured with a tester (100 kΩ/V). Voltage taken on a complex color bar including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

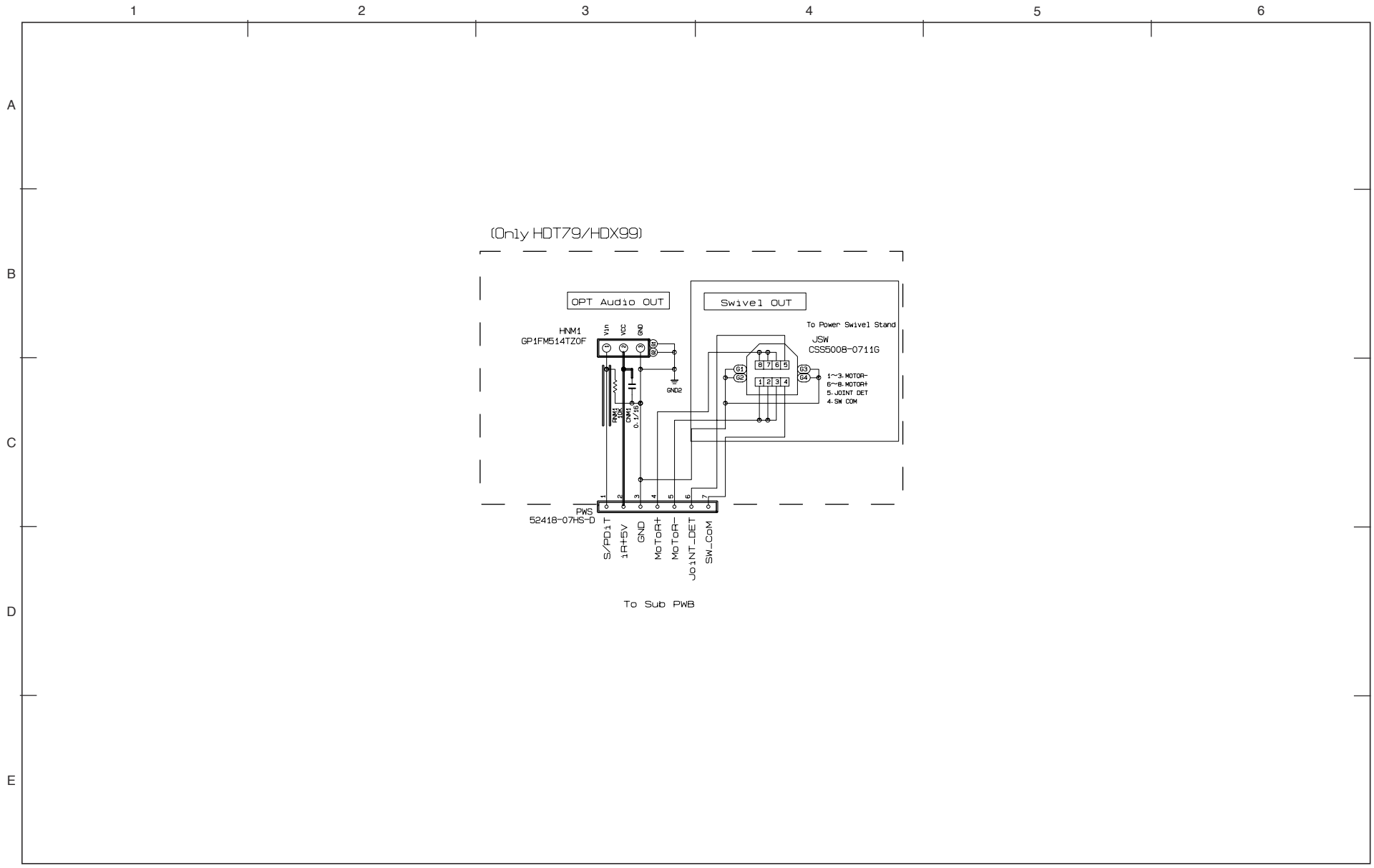


LED

- All DC voltage to be measured with a tester (100 kΩ/V). Voltage taken on a complex color bar including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

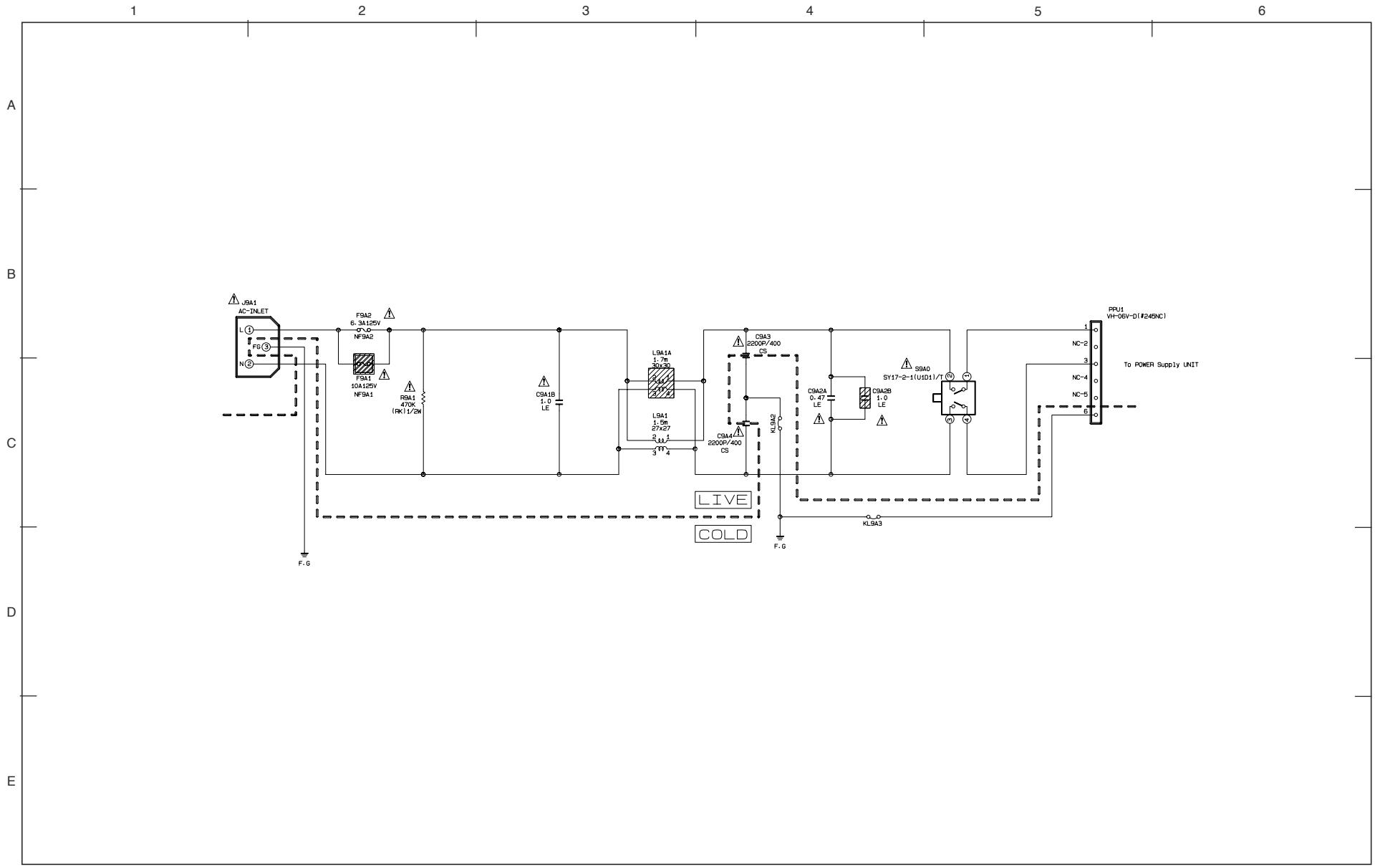


OPT

- All DC voltage to be measured with a tester (100 kΩ/V). Voltage taken on a complex color bar including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

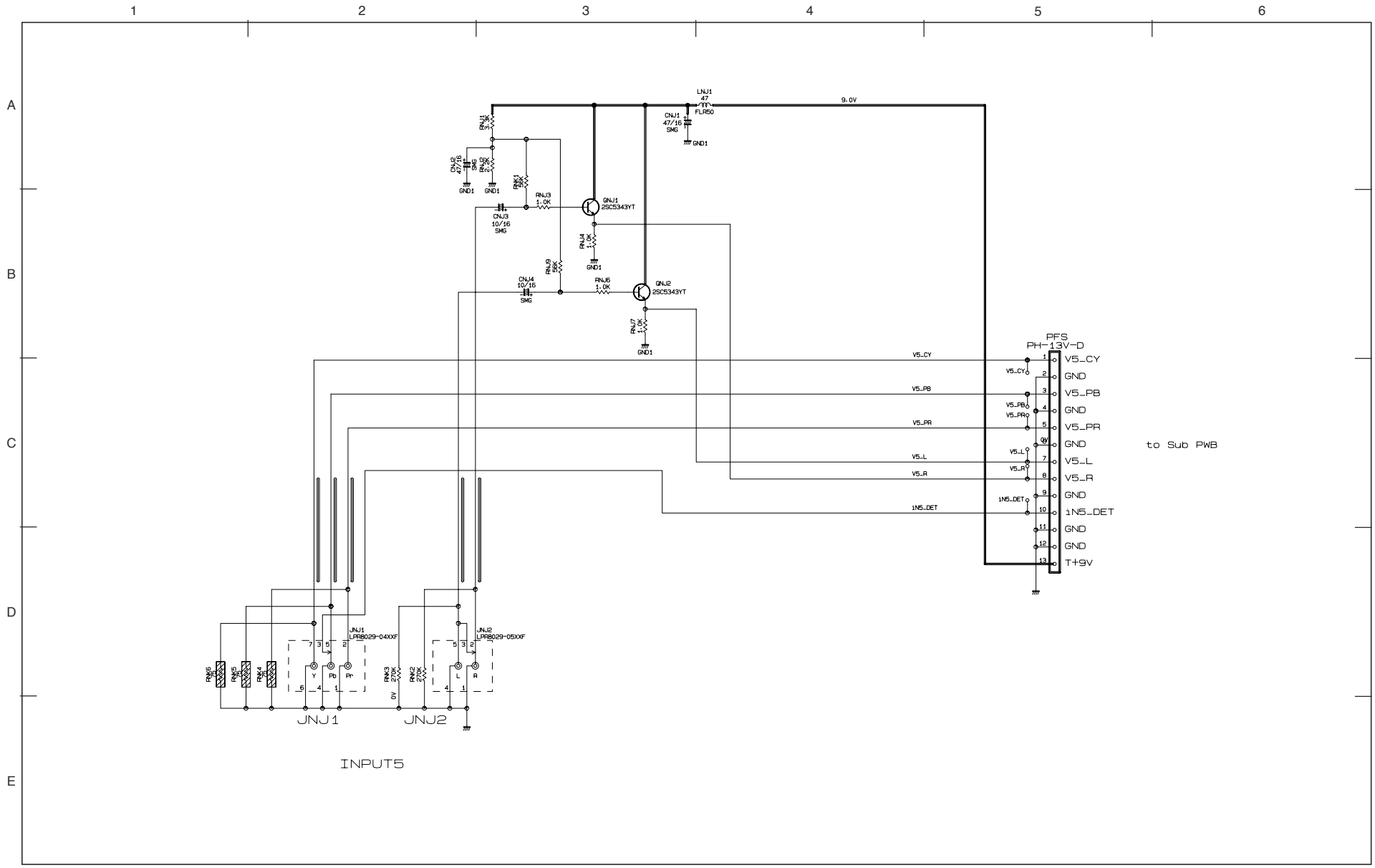


FILTER

- All DC voltage to be measured with a tester (100 kΩ/V). Voltage taken on a complex color bar including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

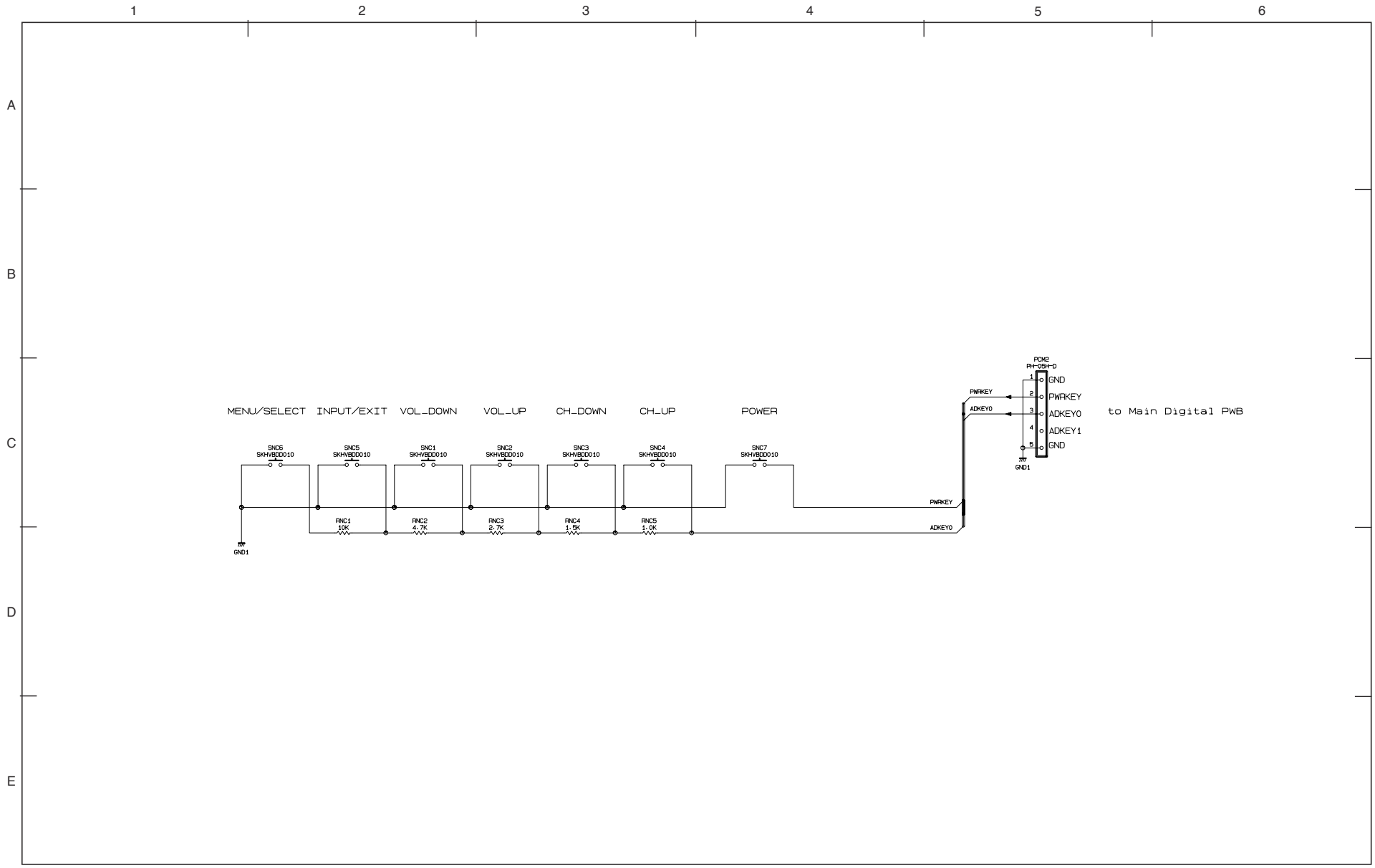


SIDE TERMINAL

- All DC voltage to be measured with a tester (100 kΩ/V). Voltage taken on a complex color bar including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

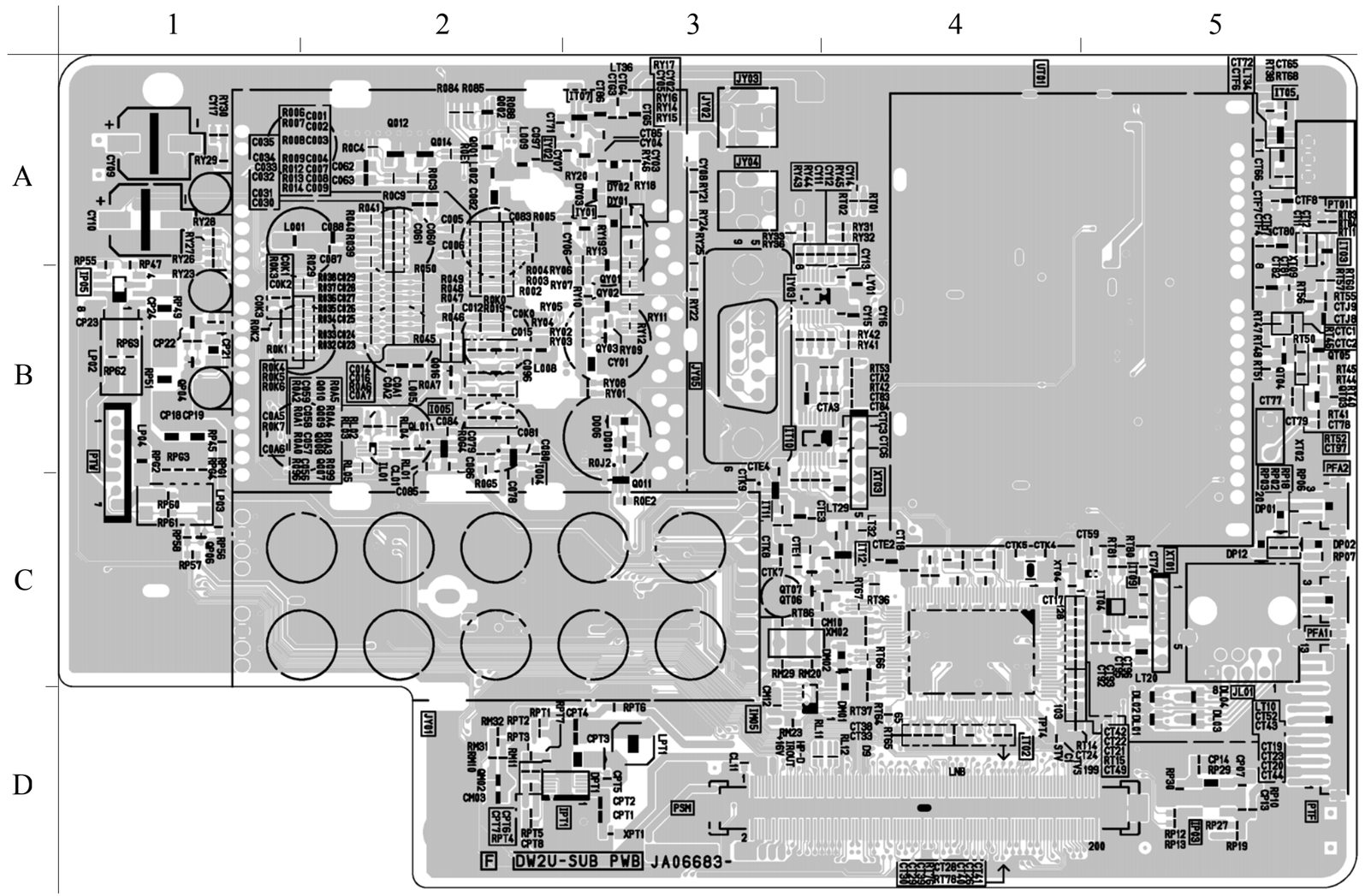


CONTROL

- All DC voltage to be measured with a tester (100 kΩ/V). Voltage taken on a complex color bar including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

PRINTED CIRCUIT BOARDS

DW2-U SUBDIGITAL PWB (Component side)



SEMICONDUCTOR LOCATION
(Component side)

IC	
I004	B-2
I005	B-2
IL01	B-2
IM05	D-3
IP03	D-5
IP05	B-1
IPT1	D-2
IT02	C-4
IT03	A-5
IT04	C-4
IT05	A-5
IT07	A-3
IT09	C-5
IT10	B-3
IT11	C-3
IT12	C-4
IY01	A-3
IY02	A-3
IY03	B-3

TRANSISTOR	
Q001	A-2
Q002	A-2
Q007	B-2
Q008	B-2
Q009	B-2
Q010	B-2
Q011	C-3
Q012	A-2
Q014	A-2
Q016	B-2
QL01	B-2
QM02	D-2
QP04	B-1
QP06	C-1
QT03	B-5
QT04	B-5
QT05	B-5
QT06	C-3
QT07	C-3
QY01	B-3
QY02	B-3
QY03	B-3

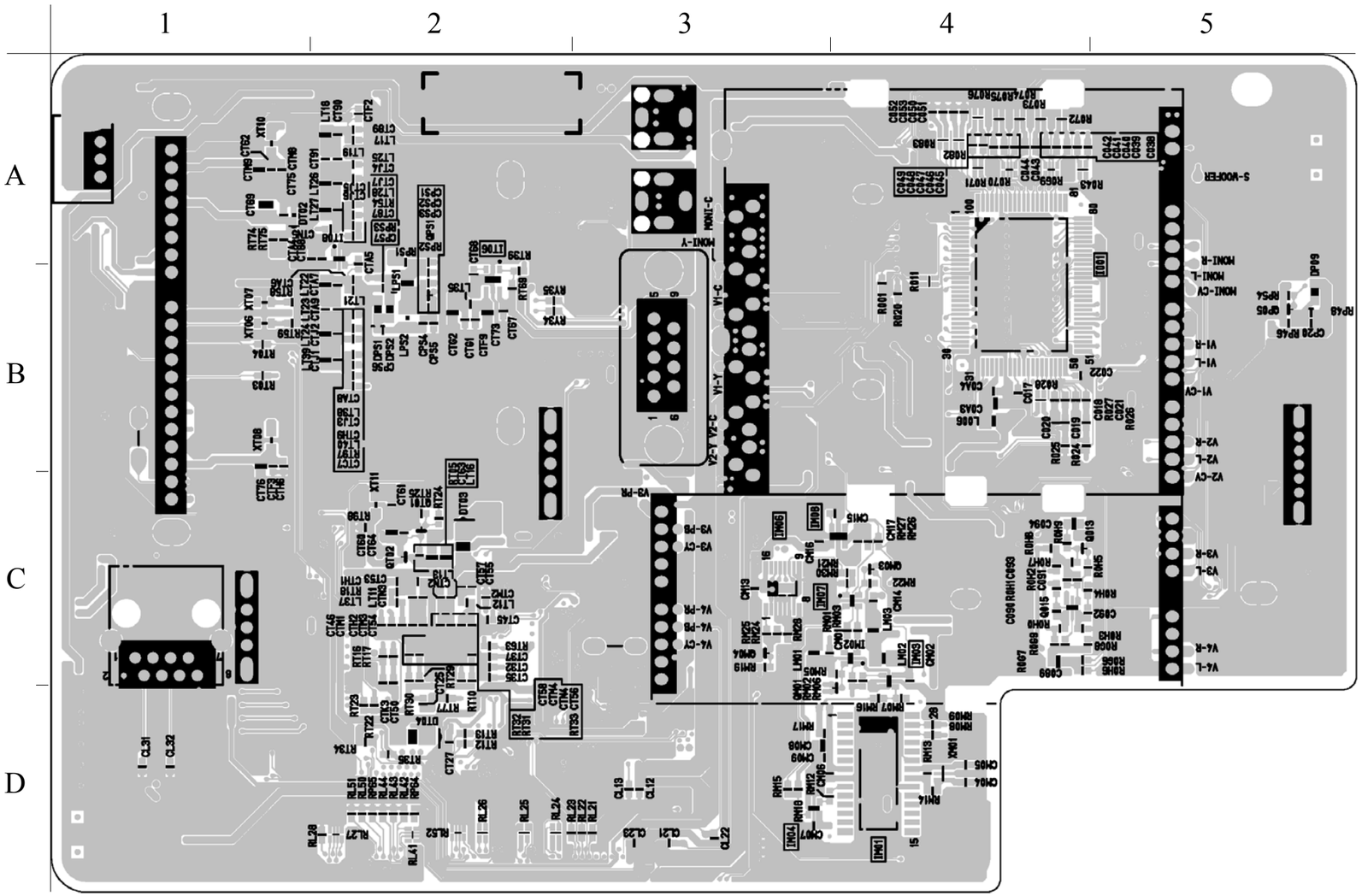
DIODE	
D001	B-3
D006	B-3
DL01	D-5
DL02	D-5
DL03	D-5
DL04	D-5
DM01	D-4
DM02	C-4
DP01	C-5
DP02	C-5
DP10	B-1
DP12	C-5
DPT1	D-2
DY01	A-3
DY02	A-3
DY03	A-3

CRYSTAL & FILTER	
XM02	C-3
XPT1	D-3
XT01	C-5
XT02	B-5
XT03	B-4
XT04	C-4
XT09	B-5

BACK TO TABLE OF CONTENTS

PRINTED CIRCUIT BOARDS

DW2-U SUBDIGITAL PWB (Solder side)



SEMICONDUCTOR LOCATION
(Solder side)

IC	
I001	B-4
IM01	D-4
IM02	C-4
IM03	C-4
IM04	D-3
IM06	C-3
IM07	C-4
IM08	C-4
IT06	B-2
IT08	A-2

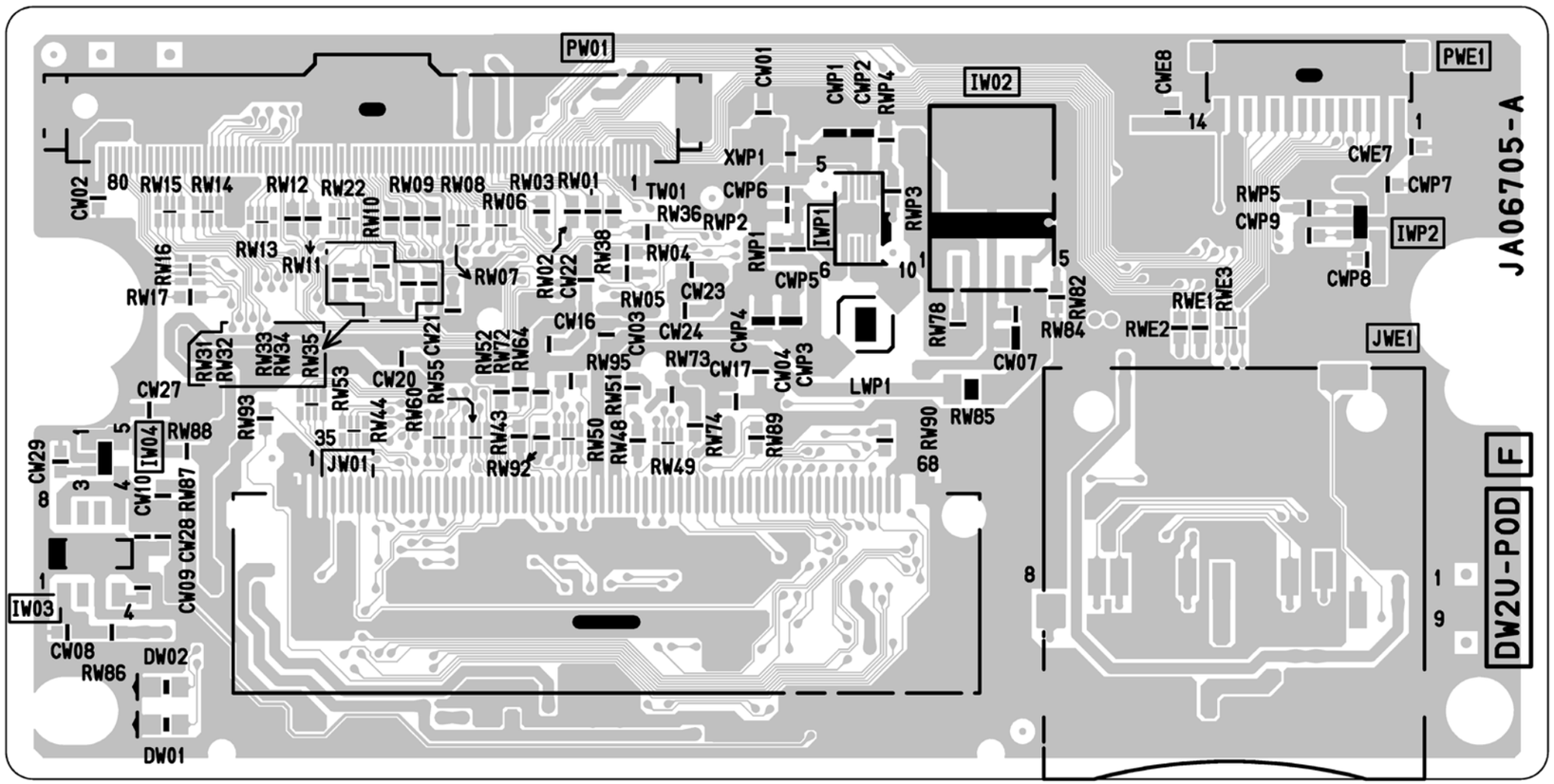
TRANSISTOR	
Q013	C-4
Q015	C-4
QM01	D-4
QM03	C-4
QM04	C-3
QP05	B-5
QPS1	B-2
QT01	C-2
QT02	C-2

DIODE	
DP09	B-5
DPS1	B-2
DPS2	B-2
DT02	A-1
DT03	C-2
DT04	D-2

CRYSTAL & FILTER	
XM01	D-4
XT06	B-1
XT07	B-1
XT08	B-1
XT10	A-1
XT11	C-2

PRINTED CIRCUIT BOARDS

DW2-U POD PWB (Component side)

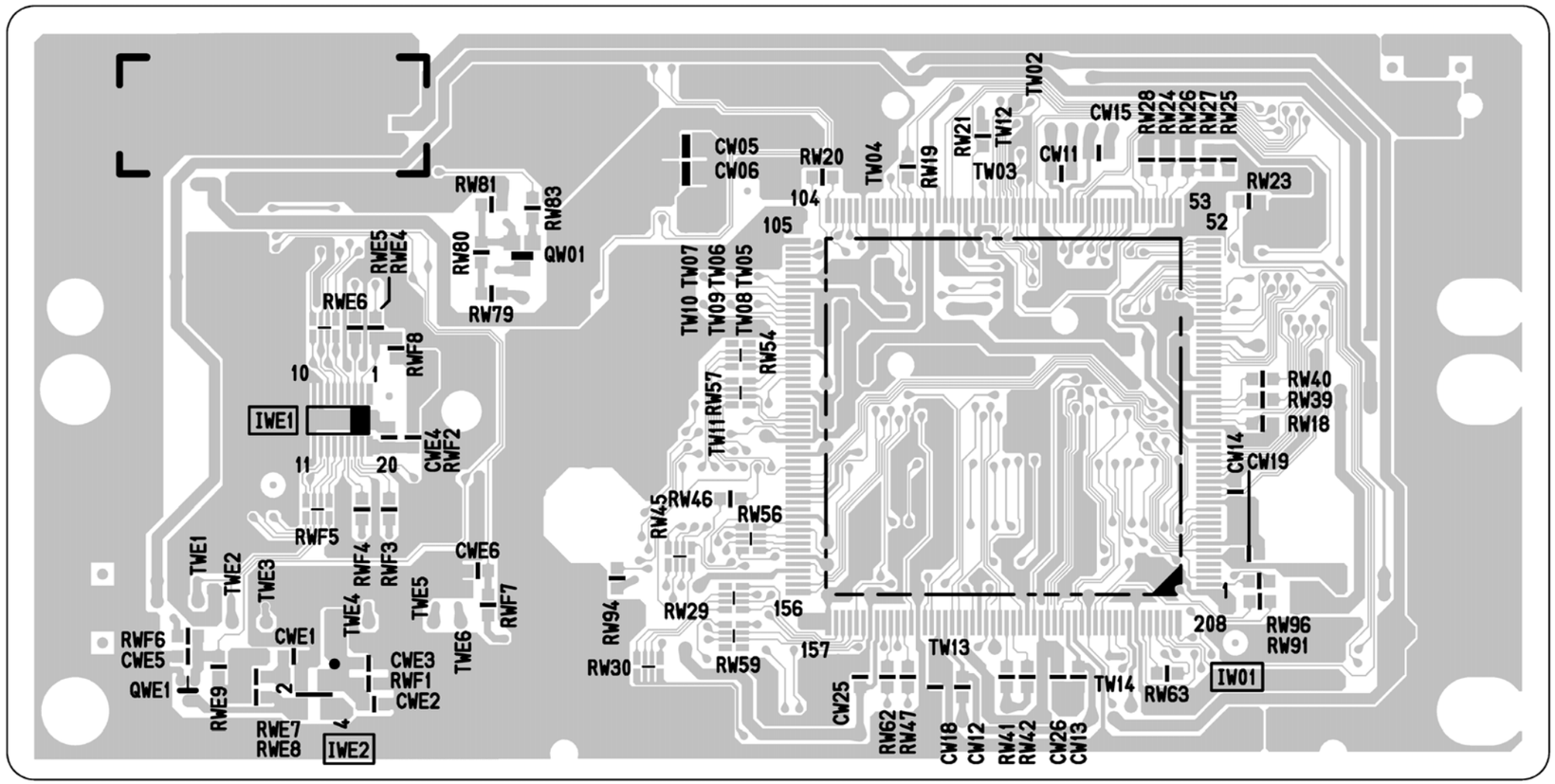


SEMICONDUCTOR LIST
(Component side)

IC
IW02 IW03 IW04 IWP1 IWP2
DIODE
DW01 DW02
CRYSTAL & FILTER
XWP1

PRINTED CIRCUIT BOARDS

DW2-U POD PWB (Solder side)



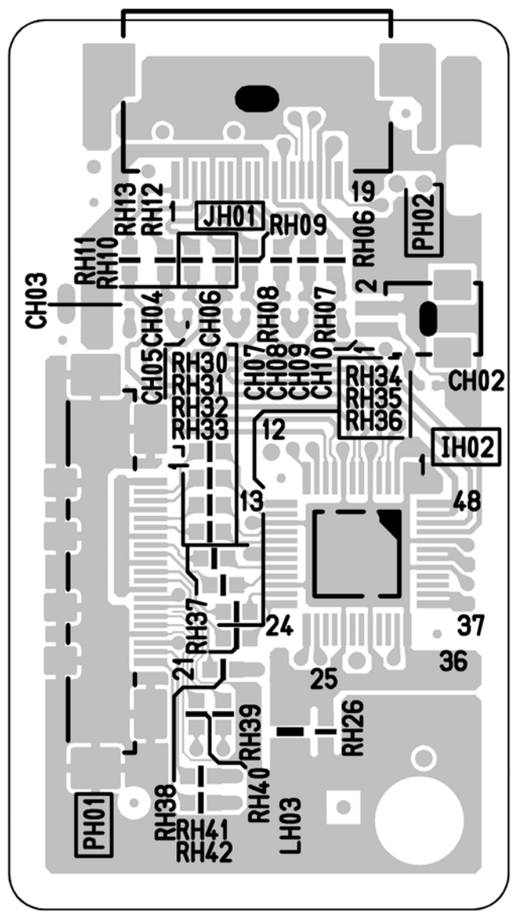
SEMICONDUCTOR LIST
(Solder side)

IC
IW01 IWE1 IWE2
TRANSISTOR
QW01 QWE1

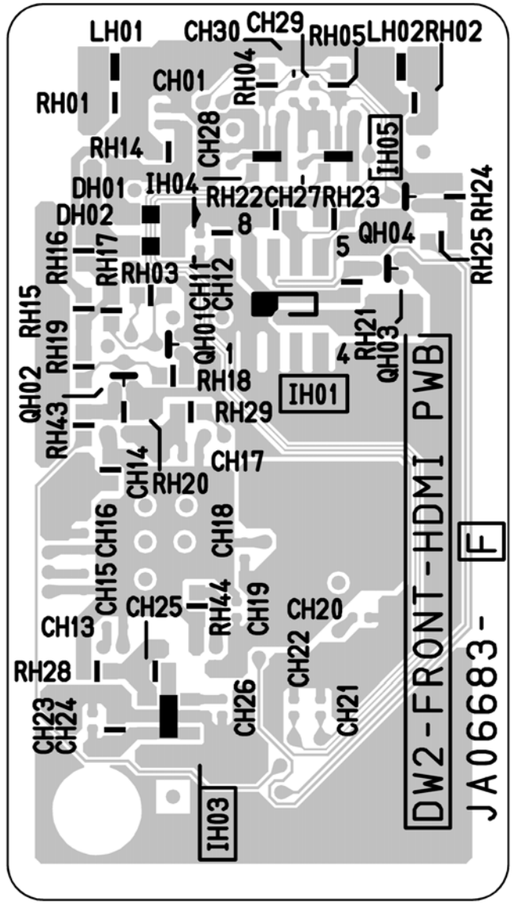
PRINTED CIRCUIT BOARDS

DW2-U FRONT HDMI PWB

(Component side)



(Solder side)



SEMICONDUCTOR LIST

Component side

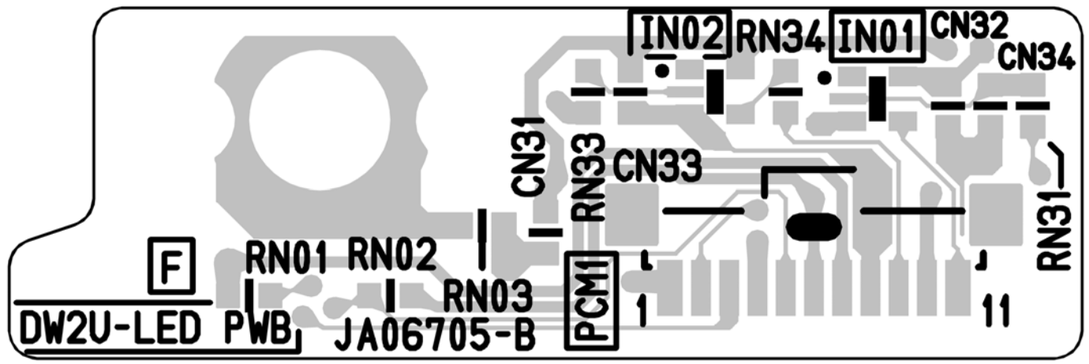
IC
IH02

Solder side

IC
IH01 IH03 IH04 IH05
DIODE
DH01 DH02
TRANSISTOR
QH01 QH02 QH03 QH04

DW2-U LED PWB

(Component side)

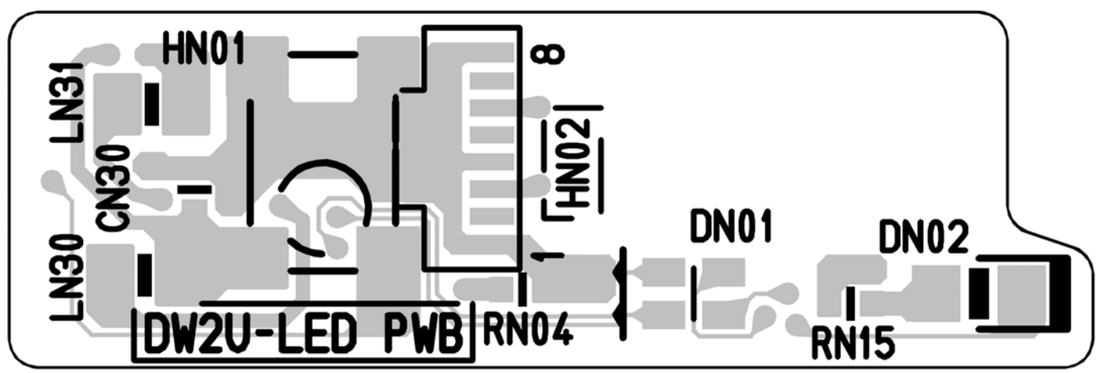


SEMICONDUCTOR LIST

Component side

IC
IN01
IN02

(Solder side)

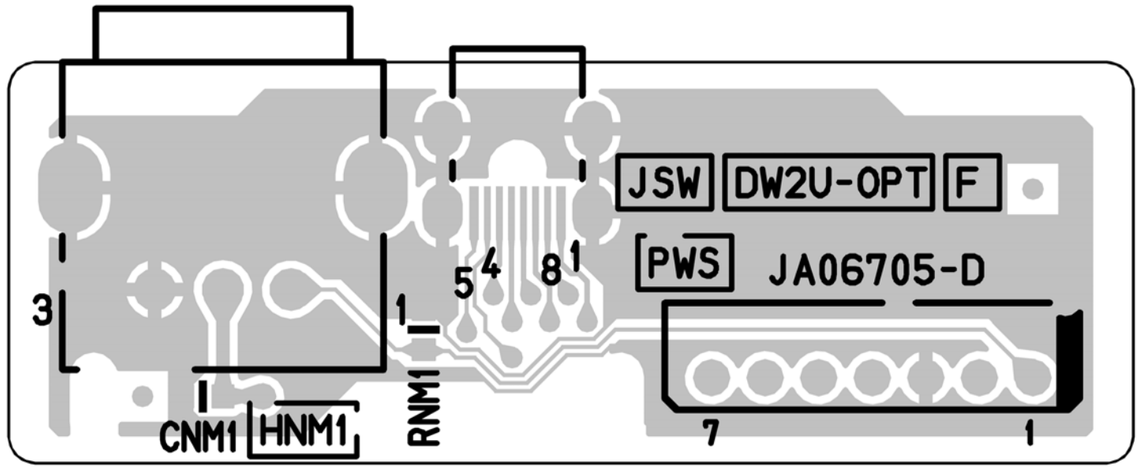


Solder side

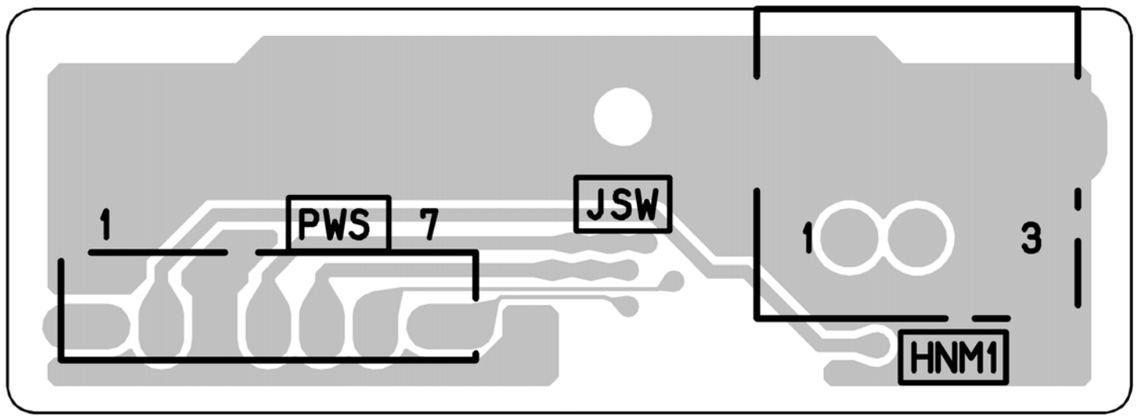
DIODE
DN01
DN02
HN01
HN02

DW2-U OPT PWB

(Component side)



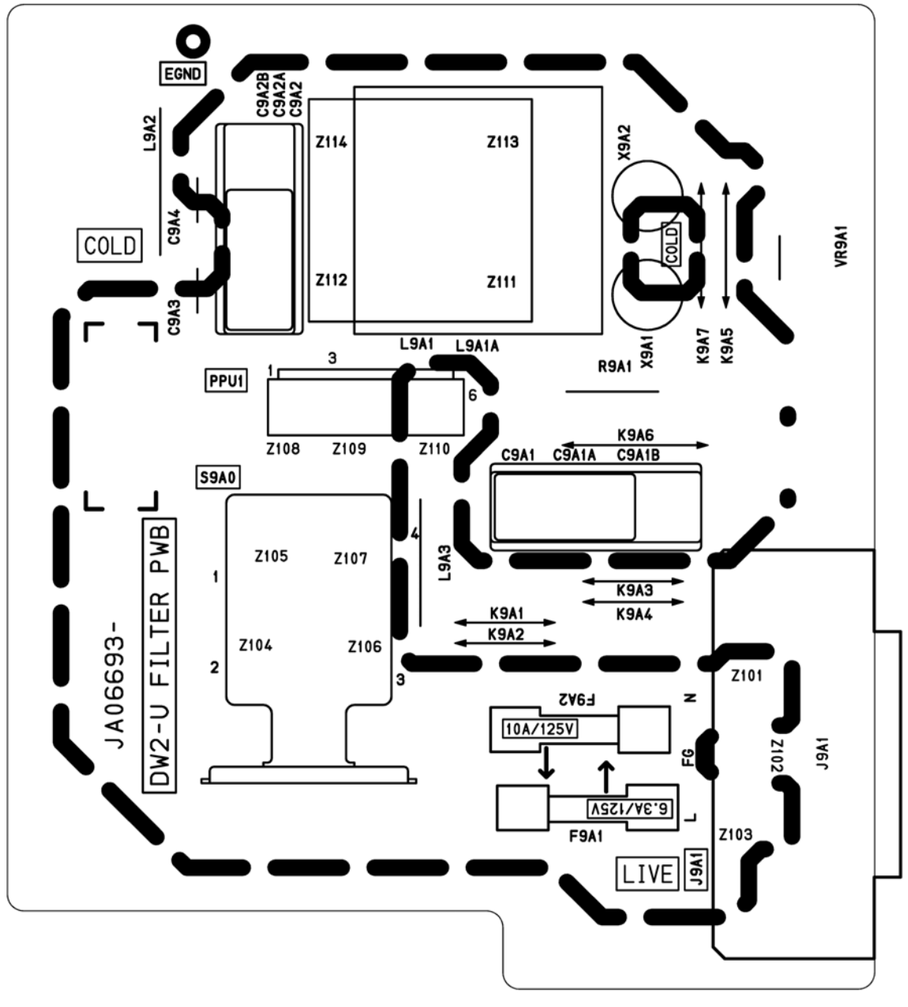
(Solder side)



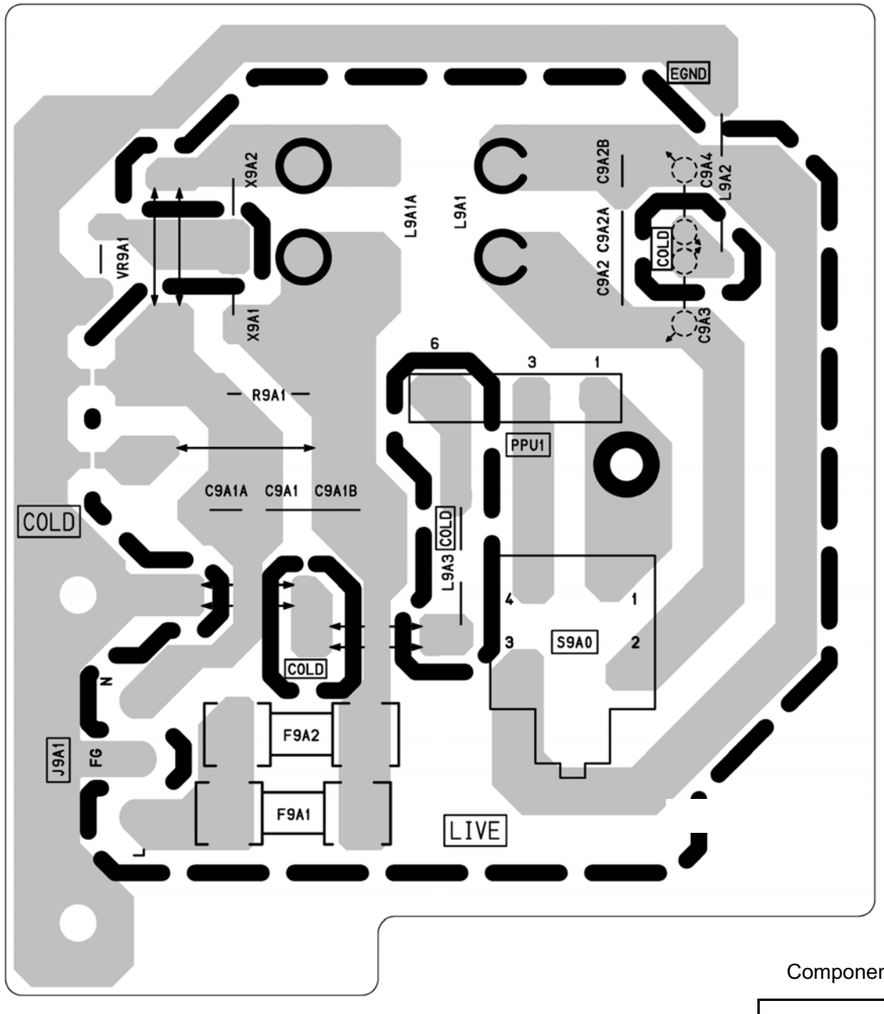
PRINTED CIRCUIT BOARDS

DW2-U FILTER PWB

(Component side)



(Solder side)

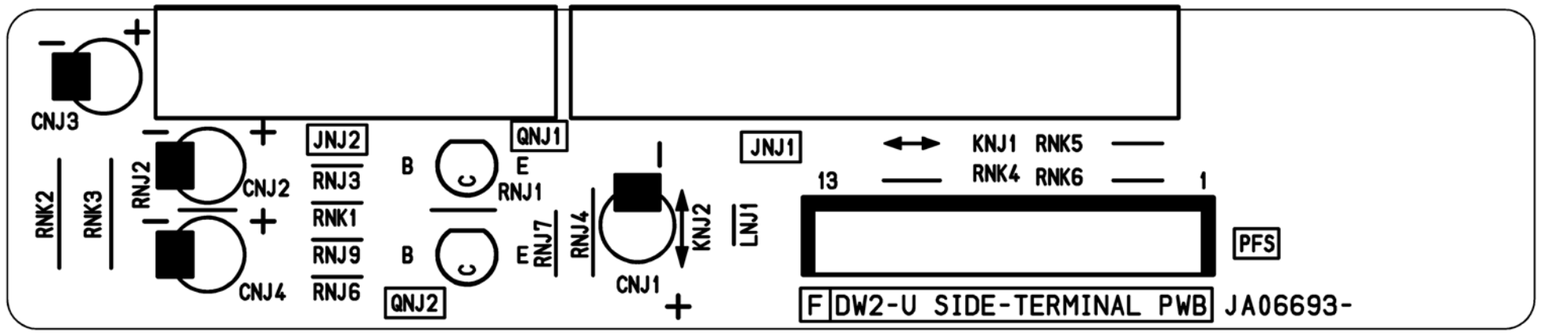


Component side

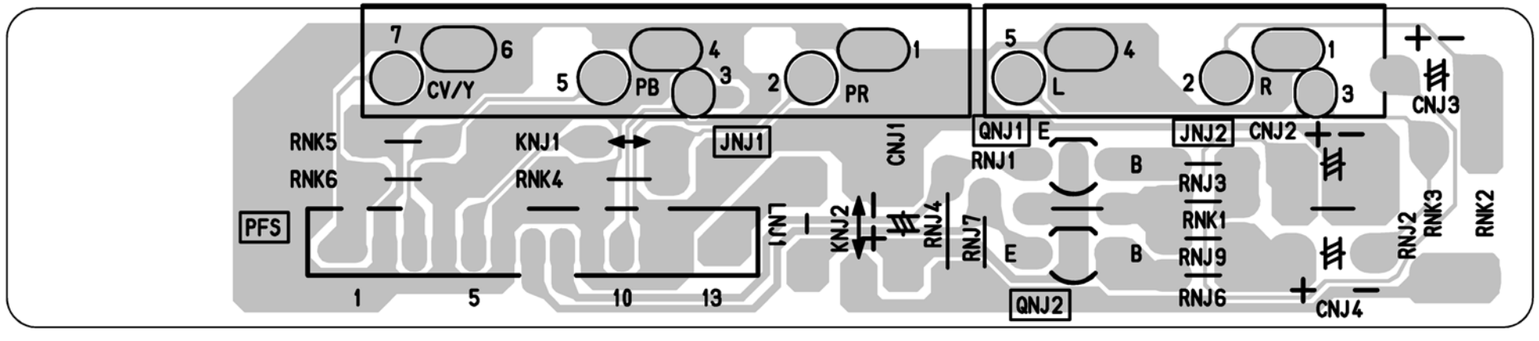
FILTER
X9A1
X9A2

DW2-U SIDE TERMINAL PWB

(Component side)



(Solder side)

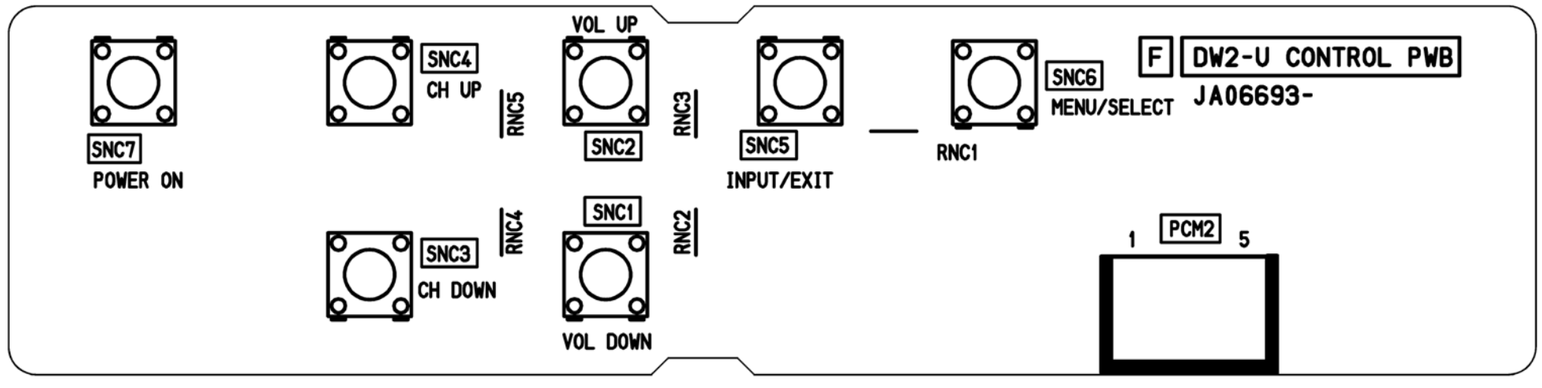


Component side

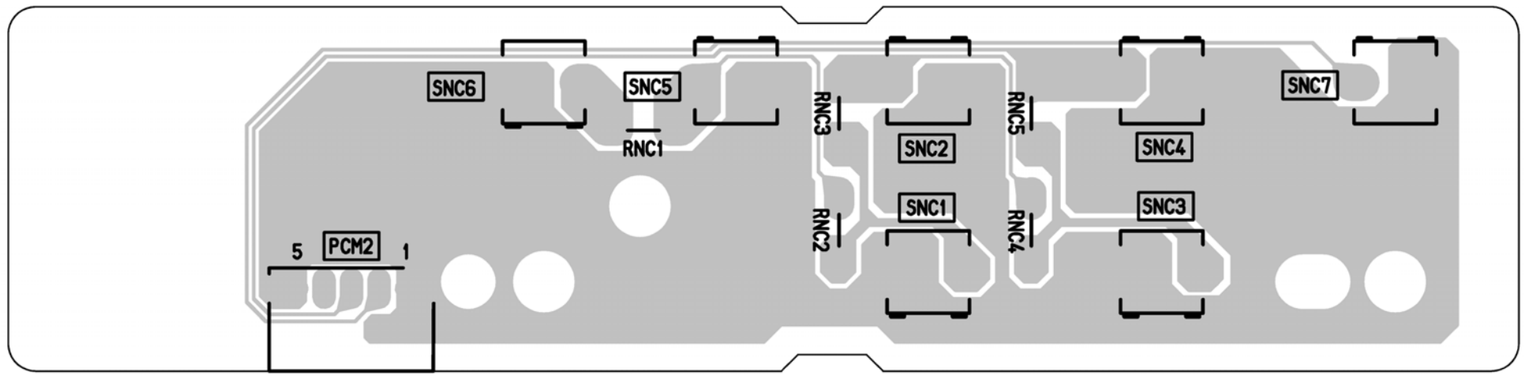
TRANSISTOR
QNJ1 QNJ2

DW2-U CONTROL PWB

(Component side)



(Solder side)



REPLACEMENT PARTS LIST

PRODUCT SERVICE NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

ABBREVIATIONS

Capacitors:
- AL: Aluminum Electrolytic
- CD: Ceramic Disc
- EL: Electrolitic
- PF: Polyester Film
- PP: Polypropylene
- PL: Plastic
- TA: Tantalum
- PR: Paper
- TM: Trimmer
- MC: Mylar

Resistors:
- CF: Carbon Film
- CC: Carbon Composition
- MF: Metal Oxide
- VR: Variable Resistor
- WW: Wire Wound
- FR: Fuse Resistor
- MG: Metal Grazed

Semiconductors:
- TR: Transistor
- DI: Diode
- ZD: Zener Diode
- VA: Varistor
- TH: Termistor
- IC: Integrated Circuit

SYMBOL	PART No.	DESCRIPTION	55HDS69	55HDT79	55HDX99	SYMBOL	PART No.	DESCRIPTION	55HDS69	55HDT79	55HDX99
						C040	AA01123R	CCC105K10-B-16CT	0	0	0
		SUBDIGITAL PWB				C041	AA01123R	CCC105K10-B-16CT	0	0	0
	JP50321		0			C042	AA01123R	CCC105K10-B-16CT	0	0	0
	JP50322			0		C043	AA01123R	CCC105K10-B-16CT	0	0	0
	JP50323				0	C044	AA01123R	CCC105K10-B-16CT	0	0	0
		CAPACITORS				C045	AA01123R	CCC105K10-B-16CT	0	0	0
C001	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	C046	AA01123R	CCC105K10-B-16CT	0	0	0
C002	AA01343R	CERAMIC CAPACITOR(0.047UF 25V-	0	0	0	C047	AA01123R	CCC105K10-B-16CT	0	0	0
C003	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	C048	AA01123R	CCC105K10-B-16CT	0	0	0
C004	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	C049	AA01123R	CCC105K10-B-16CT	0	0	0
C005	AA01115R	CAP.CHIP1608-B-4.7UF6.3V	0	0	0	C060	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0
C006	AA01116R	CAP.CHIP1608-B-10UF 6.3V M	0	0	0	C061	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0
C007	AA01343R	CERAMIC CAPACITOR(0.047UF 25V-	0	0	0	C062	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0
C008	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	C063	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0
C009	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	C078	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0
C012	AA01116R	CAP.CHIP1608-B-10UF 6.3V M	0	0	0	C079	0893126R	CAP 1608CHIP 100PFJCH 50V TAPE	0	0	0
C014	AA01123R	CCC105K10-B-16CT	0	0	0	C080	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE	0	0	0
C015	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	C081	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0
C016	AA01123R	CCC105K10-B-16CT	0	0	0	C082	AA01185R	CAP.CHIP-CERAMIC 22UF/16V B 32	0	0	0
C017	AA01123R	CCC105K10-B-16CT	0	0	0	C083	AA01141R	CERAMIC CAPACITOR(0.1UF 16V)	0	0	0
C018	0893188R	CERAMIC CAPACITOR(47000PF 16V)	0	0	0	C084	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0
C019	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	C085	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
C020	AA01343R	CERAMIC CAPACITOR(0.047UF 25V-	0	0	0	C086	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0
C021	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	C087	AA01141R	CERAMIC CAPACITOR(0.1UF 16V)	0	0	0
C022	0893188R	CERAMIC CAPACITOR(47000PF 16V)	0	0	0	C088	AA00969R	CAP.CHIP2125-B-22UF6.3V	0	0	0
C023	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	C089	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)	0	0	0
C024	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	C090	AA01123R	CCC105K10-B-16CT	0	0	0
C025	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	C091	AA01123R	CCC105K10-B-16CT	0	0	0
C026	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	C092	AA01123R	CCC105K10-B-16CT	0	0	0
C027	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	C093	AA01113R	CCC225K06-B-16CT	0	0	0
C028	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	C094	AA00968R	CCC106M06-B-20CT (10UF 6.3V 2012M)	0	0	0
C029	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	C096	AA01141R	CERAMIC CAPACITOR(0.1UF 16V)	0	0	0
C030	AA01123R	CCC105K10-B-16CT	0	0	0	C097	AA01141R	CERAMIC CAPACITOR(0.1UF 16V)	0	0	0
C031	AA01123R	CCC105K10-B-16CT	0	0	0	C0A1	AA00969R	CAP.CHIP2125-B-22UF6.3V	0	0	0
C032	AA01123R	CCC105K10-B-16CT	0	0	0	C0A2	AA01141R	CERAMIC CAPACITOR(0.1UF 16V)	0	0	0
C033	AA01123R	CCC105K10-B-16CT	0	0	0	C0A3	AA00969R	CAP.CHIP2125-B-22UF6.3V	0	0	0
C034	AA01123R	CCC105K10-B-16CT	0	0	0	C0A4	AA01141R	CERAMIC CAPACITOR(0.1UF 16V)	0	0	0
C035	AA01123R	CCC105K10-B-16CT	0	0	0	C0A5	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	0
C038	AA01123R	CCC105K10-B-16CT	0	0	0	C0A6	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	0
C039	AA01123R	CCC105K10-B-16CT	0	0	0	C0K0	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0

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SYMBOL	PART #	DESCRIPTION	55HD969	55HD779	55HDX99	SYMBOL	PART #	DESCRIPTION	55HD969	55HD779	55HDX99
C0K1	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	CT03	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
C0K2	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	CT04	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
C0K3	AA01136R	CERAMIC CAPACITOR(0.47UF 6.3V)	0	0	0	CT11	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH01	0893333R	CAP.CHIP-CERAMIC 10000PF 16V TAPE	0	0	0	CT12	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0
CH02	CE00151R	EZJZ0V80010	0	0	0	CT15	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH03	CE00151R	EZJZ0V80010	0	0	0	CT16	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH04	CE00151R	EZJZ0V80010	0	0	0	CT17	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH05	CE00151R	EZJZ0V80010	0	0	0	CT18	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH06	CE00151R	EZJZ0V80010	0	0	0	CT19	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH07	CE00151R	EZJZ0V80010	0	0	0	CT20	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH08	CE00151R	EZJZ0V80010	0	0	0	CT21	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH09	CE00151R	EZJZ0V80010	0	0	0	CT22	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH10	CE00151R	EZJZ0V80010	0	0	0	CT23	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH13	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	0	CT24	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH14	AA01116R	CAP.CHIP1608-B-10UF 6.3V M	0	0	0	CT25	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH15	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	0	CT26	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH16	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	0	CT27	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH17	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	0	CT28	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH18	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	0	CT29	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH19	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	0	CT30	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH20	0893333R	CAP.CHIP-CERAMIC 10000PF 16V TAPE	0	0	0	CT31	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH21	CE00151R	EZJZ0V80010	0	0	0	CT32	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH22	CE00151R	EZJZ0V80010	0	0	0	CT33	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH23	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	0	CT34	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH24	AA01116R	CAP.CHIP1608-B-10UF 6.3V M	0	0	0	CT35	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH25	AA01116R	CAP.CHIP1608-B-10UF 6.3V M	0	0	0	CT36	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH26	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	0	CT37	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH27	AA01216R	CAP.CHIP-CERAMIC 1005B 1UF 6.3	0	0	0	CT38	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH28	AA01216R	CAP.CHIP-CERAMIC 1005B 1UF 6.3	0	0	0	CT39	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH29	CE00151R	EZJZ0V80010	0	0	0	CT40	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CH30	CE00151R	EZJZ0V80010	0	0	0	CT41	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CL01	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	CT42	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CL11	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	CT43	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CL12	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	CT44	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CL13	AA01347R	CERAMIC CAPACITOR(0.1UF 25V-B)	0	0	0	CT45	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CL21	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	CT46	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CL22	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	CT47	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CL23	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	CT48	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CM01	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE		0	0	CT49	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CM02	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE			0	CT50	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CM03	AA00968R	CCC106M06-B-20CT (10UF 6.3V 2012M)		0	0	CT51	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	0	0	0
CM06	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE		0	0	CT52	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CM07	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE		0	0	CT53	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	0	0	0
CM08	AA00955R	CAP.CHIP-CERAMIC 2125 B 4.7UF		0	0	CT54	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CM09	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE		0	0	CT55	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	0	0	0
CM10	0893199R	CAP 1608CHIP 220PFKB 50V TAPE		0	0	CT56	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	0	0	0
CM11	0893199R	CAP 1608CHIP 220PFKB 50V TAPE		0	0	CT57	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	0	0	0
CM12	AA01812R	CCC153K50-B-16CT		0	0	CT58	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CM13	AA01812R	CCC153K50-B-16CT		0	0	CT59	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CM14	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE		0	0	CT60	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0
CM15	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0	CT61	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CM16	AA01123R	CCC105K10-B-16CT	0	0	0	CT62	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CM17	AA01123R	CCC105K10-B-16CT	0	0	0	CT63	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0
CP07	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0	CT64	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CP13	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0	CT65	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0
CP14	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0	CT66	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	0	0	0
CP18	AA01185R	CAP.CHIP-CERAMIC 22UF/16V B 32		0	0	CT67	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0
CP19	AA01185R	CAP.CHIP-CERAMIC 22UF/16V B 32		0	0	CT68	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	0	0	0
CP20	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE		0	0	CT69	AA01173R	CCC1R0K50-B-32CT 1UF/50V-B-3225	0	0	0
CP21	AA00699R	CAP.CHIP-CERAMIC 10UFK 16V B 3		0	0	CT71	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0
CP22	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK		0	0	CT72	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0
CP23	0893193R	CAP 1608CHIP 10000PFKB 25V TAPE		0	0	CT73	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0
CP24	0893193R	CAP 1608CHIP 10000PFKB 25V TAPE		0	0	CT74	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CPS1	AA01123R	CCC105K10-B-16CT	0	0	0	CT75	AA01802R	CCC103K50-B-16CT MCH18	0	0	0
CPS2	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	CT76	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0
CPS3	0893211R	CAP 1608CHIP 1500PFKB 50V TAPE	0	0	0	CT77	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE	0	0	0
CPS4	0893127R	CAP 1608CHIP 120PFJCH 50V TAPE	0	0	0	CT78	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0
CPS5	0893193R	CAP 1608CHIP 10000PFKB 25V TAPE	0	0	0	CT79	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CPS6	0893127R	CAP 1608CHIP 120PFJCH 50V TAPE	0	0	0	CT80	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0
CPS7	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0	CT81	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0
CPT2	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0	CT83	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CPT3	AA00969R	CAP.CHIP2125-B-22UF6.3V	0	0	0	CT84	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE	0	0	0
CPT5	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0	CT85	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	0	0	0
CPT7	0893215R	CAP 1608CHIP 3300PFKB 50V TAPE	0	0	0	CT86	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0
CPT8	0893188R	CERAMIC CAPACITOR(47000PF 16V)	0	0	0	CT89	0893123R	CAP 1608CHIP 56PFJCH 50V TAPE	0	0	0

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SYMBOL	PART #	DESCRIPTION	55HD360	55HDT79	55HDX99	SYMBOL	PART #	DESCRIPTION	55HDS69	55HDT74	55HDX99
CT90	0893124R	CAP 1608CHIP 68PFJCH 50V TAPE	0	0	0	CY10	AD00633R	CEC471M16-EWMT 105	0	0	0
CT91	0893115R	CAP 1608CHIP 15PFJCH 50V TAPE	0	0	0	CY11	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0
CT92	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	CY12	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0
CT93	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0	CY13	AA01123R	CCC105K10-B-16CT	0	0	0
CT95	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	CY14	AA01123R	CCC105K10-B-16CT	0	0	0
CT96	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	CY15	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CT97	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0	CY16	AA00966R	CERAMIC CAPACITOR(4.7UF 6.3V)	0	0	0
CTA1	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0						
CTA3	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0			**DIODES**			
CTC1	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	D001	CC01921R	SDS142WKF_PF	0	0	0
CTC2	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0	DH02	CC01891R	SDS511_PF	0	0	0
CTC3	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	DM01	CC01891R	SDS511_PF		0	0
CTC4	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	DM02	CC01891R	SDS511_PF		0	0
CTC5	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	DP01	CC01891R	SDS511_PF	0	0	0
CTC6	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	DP02	CC01891R	SDS511_PF	0	0	0
CTC8	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	DP10	CC02075R	ZENER.CHIP EDZ TE61 5.1B		0	0
CTC9	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	DPS1	CC02022R	ZENER.CHIP UDZSTE-1730B	0	0	0
CTE1	AA00968R	CCC106M06-B-20CT (10UF 6.3V 2012M)	0	0	0	DPS2	CC01891R	SDS511_PF	0	0	0
CTE2	AA00968R	CCC106M06-B-20CT (10UF 6.3V 2012M)	0	0	0	DPT1	CC02211R	RSX201L-30	0	0	0
CTE3	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	DT02	CC01131R	ZENER.CHIP MAZS3000H	0	0	0
CTE4	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0	DY01	CC01999R	ZENER.CHIP UDZSTE-174.3B		0	0
CTE5	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	DY02	CC01999R	ZENER.CHIP UDZSTE-174.3B		0	0
CTF2	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0						
CTF3	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0			**INTEGRATED CIRCUITS (IC's)**			
CTF4	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	I001	CK53531U	R2S11008FP	0	0	0
CTF6	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	I004	CK51331R	TK11100CS	0	0	0
CTF7	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	I005	CK37218R	MONO IC TK11150CSCL	0	0	0
CTF8	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0	IH02	CK53891R	TMDS SW IC CXB1441R	0	0	0
CTF9	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	IH03	CK37216R	MONO IC TK11133CSCL	0	0	0
CTG1	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	IH04	CK38329R	DIGITAL MONOLITHIC IC (SN74LVC	0	0	0
CTG2	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0	IH05	CK38329R	DIGITAL MONOLITHIC IC (SN74LVC	0	0	0
CTG3	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	IL01	CK50961R	SN74CB3T3306DCUR	0	0	0
CTG4	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	IM01	CK51632R	9DR32DW8-1046		0	0
CTG5	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0	IM02	CK51091R	SN74LVC1G3157DCKR		0	0
CTG6	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	IM03	CK38328R	IC SN74LVC1G125DCKR			0
CTG9	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	IM04	CK38328R	IC SN74LVC1G125DCKR		0	0
CTH1	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	0	0	0	IM05	2015203R	HD74HC00TELLE		0	0
CTH2	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	IM06	CK54692R	GENERAL LOGIC IV(TC74AC163FT)		0	0
CTH6	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0	IM07	CK51091R	SN74LVC1G3157DCKR		0	0
CTH7	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0	IM08	CK37218R	MONO IC TK11150CSCL	0	0	0
CTJ4	0893125R	CAP 1608CHIP 82PFJCH 50V TAPE	0	0	0	IP03	CK52481R	TK73400TCB-G	0	0	0
CTJ5	0893119R	CAP 1608CHIP 33PFJCH 50V TAPE	0	0	0	IP05	CK50461R	ANALOG MONOLITHIC IC(BA6287F-		0	0
CTJ6	0893106R	CAP 1608CHIP 4PFCCK 50V TAPE	0	0	0	IPT1	CK54161R	ANALOG MONOLITHIC IC(MP2361DK	0	0	0
CTJ7	0893124R	CAP 1608CHIP 68PFJCH 50V TAPE	0	0	0	IT02	CK54051U	THEATER314	0	0	0
CTJ8	AA00968R	CCC106M06-B-20CT (10UF 6.3V 2012M)	0	0	0	IT03	CK51091R	SN74LVC1G3157DCKR	0	0	0
CTK3	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	IT04	CK50961R	SN74CB3T3306DCUR	0	0	0
CTK4	0893113R	CAP 1608CHIP 10PFCCH 50V TAPE	0	0	0	IT05	CK37218R	MONO IC TK11150CSCL	0	0	0
CTK5	0893113R	CAP 1608CHIP 10PFCCH 50V TAPE	0	0	0	IT06	CK37605R	IC TK11250CM	0	0	0
CTK6	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0	IT07	CK37605R	IC TK11250CM	0	0	0
CTK7	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	IT09	CK51151R	UPC3221GV	0	0	0
CTK8	AA00968R	CCC106M06-B-20CT (10UF 6.3V 2012M)	0	0	0	IT10	CK51141R	UPC3220GR	0	0	0
CTK9	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE	0	0	0	IT11	CK37211R	MONO IC TK11118CSCL	0	0	0
CTM1	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	IT12	CK37216R	MONO IC TK11133CSCL	0	0	0
CTM2	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	IY01	CK38325R	DIGITAL MONOLITHIC IC (SN74LVC		0	0
CTM3	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	IY02	CK38325R	DIGITAL MONOLITHIC IC (SN74LVC		0	0
CTM4	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	IY03	CK50027R	DIGITAL MONOLITHIC IC (MAX202I	0	0	0
CTM5	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0						
CTM6	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0			**COILS**			
CTM7	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0	L001	BA00887R	LBC2518 CHIP COIL 10UH	0	0	0
CTM8	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0	L002	BA00887R	LBC2518 CHIP COIL 10UH	0	0	0
CTM9	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0	L005	BA00887R	LBC2518 CHIP COIL 10UH	0	0	0
CTN1	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	0	0	0	L006	BA00887R	LBC2518 CHIP COIL 10UH	0	0	0
CTN2	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	0	0	0	L008	BA00887R	LBC2518 CHIP COIL 10UH	0	0	0
CTN3	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	0	0	0	L009	BA00887R	LBC2518 CHIP COIL 10UH	0	0	0
CTN4	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0	LM01	BA00894R	LBC2518 CHIP COIL 100UH		0	0
CTN5	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0	LM02	BA00894R	LBC2518 CHIP COIL 100UH			0
CY01	AA01185R	CAP.CHIP-CERAMIC 22UF/16V B 32		0	0	LM03	BA00894R	LBC2518 CHIP COIL 100UH		0	0
CY02	0893126R	CAP 1608CHIP 100PFJCH 50V TAPE		0	0	LP04	BA01164R	GLC2518 CHIP INDUCTOR 10UH	0	0	0
CY03	0893126R	CAP 1608CHIP 100PFJCH 50V TAPE		0	0	LPS1	BA02185R	HCC221J2520CT	0	0	0
CY04	0893126R	CAP 1608CHIP 100PFJCH 50V TAPE		0	0	LPS2	BA02244R	HCC102J32CT	0	0	0
CY05	0893126R	CAP 1608CHIP 100PFJCH 50V TAPE		0	0	LPT1	BA02251R	7E06NG TYPE POWER INDUCTOR 4.7	0	0	0
CY06	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE		0	0	LT10	BM10348R	CHIP FERRITE BEAD BLM18PG121SN	0	0	0
CY07	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE		0	0	LT11	BM10348R	CHIP FERRITE BEAD BLM18PG121SN	0	0	0
CY08	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	0	LT12	BM10348R	CHIP FERRITE BEAD BLM18PG121SN	0	0	0
CY09	AD00633R	CEC471M16-EWMT 105	0	0	0	LT13	BM10348R	CHIP FERRITE BEAD BLM18PG121SN	0	0	0

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SYMBOL	PART #	DESCRIPTION	55HD369	55HDT79	55HDX99	SYMBOL	PART #	DESCRIPTION	55HDS69	55HDT79	55HDX99
LT16	BM00151R	FILTER BLM21P300SPT	0	0	0	R028	AQ00421R	CHIP RESISTOR 1608(2)0OHM	0	0	0
LT17	BA00161R	COIL HCC47NK16CT-HK1608	0	0	0	R029	AQ00457R	RES.-CHIP 1/16W 1.0K-J (2 UNIT)	0	0	0
LT18	BA01227R	HK2125 TYPE CHIP INDUCTOR 150N	0	0	0	R032	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
LT19	BA00162R	CHIP COIL 56NK16CT-HK1608	0	0	0	R033	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
LT20	BA01127R	MLF2012 CHIP INDUCTOR 1.8UH	0	0	0	R034	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
LT25	BA00189R	CHIP COIL 33NJ16CT-HK1608	0	0	0	R035	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
LT26	BA01234R	HK2125 TYPE CHIP INDUCTOR 470N	0	0	0	R036	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
LT27	BA01225R	HK2125 TYPE CHIP INDUCTOR 100N	0	0	0	R037	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
LT28	BA00191R	COIL HCC39NJ16CT-HK1608	0	0	0	R038	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
LT29	BA01127R	MLF2012 CHIP INDUCTOR 1.8UH	0	0	0	R039	AQ00439R	CHIP RESISTOR 47 1608	0	0	0
LT30	BM10348R	CHIP FERRITE BEAD BLM18PG121SN	0	0	0	R040	AQ00439R	CHIP RESISTOR 47 1608	0	0	0
LT31	BM10348R	CHIP FERRITE BEAD BLM18PG121SN	0	0	0	R041	AQ00439R	CHIP RESISTOR 47 1608	0	0	0
LT32	BM10348R	CHIP FERRITE BEAD BLM18PG121SN	0	0	0	R043	AQ00439R	CHIP RESISTOR 47 1608	0	0	0
LT34	BM10348R	CHIP FERRITE BEAD BLM18PG121SN	0	0	0	R045	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	0
LT35	BM10348R	CHIP FERRITE BEAD BLM18PG121SN	0	0	0	R046	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	0
LT36	BM10348R	CHIP FERRITE BEAD BLM18PG121SN	0	0	0	R047	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	0
LT37	BM10348R	CHIP FERRITE BEAD BLM18PG121SN	0	0	0	R048	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	0
LY01	BA00894R	LBC2518 CHIP COIL 100UH	0	0	0	R049	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	0
						R050	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	0
		TRANSISTORS				R069	AQ00519R	CHIP RESISTOR 47OHM	0	0	0
Q001	CA02162R	SUT487J	0	0	0	R070	AQ00519R	CHIP RESISTOR 47OHM	0	0	0
Q002	CA02162R	SUT487J	0	0	0	R071	AQ00439R	CHIP RESISTOR 47 1608	0	0	0
Q007	1323294R	TRS.CHIP 2SA1774 TL (R/S)	0	0	0	R072	AQ00484R	RES.-CHIP 1/16W 100K-J (2 UNIT	0	0	0
Q008	1323294R	TRS.CHIP 2SA1774 TL (R/S)	0	0	0	R073	AQ00484R	RES.-CHIP 1/16W 100K-J (2 UNIT	0	0	0
Q009	1323294R	TRS.CHIP 2SA1774 TL (R/S)	0	0	0	R074	AQ00484R	RES.-CHIP 1/16W 100K-J (2 UNIT	0	0	0
Q010	1323294R	TRS.CHIP 2SA1774 TL (R/S)	0	0	0	R075	AQ00484R	RES.-CHIP 1/16W 100K-J (2 UNIT	0	0	0
Q011	CA01181R	D-TRS.CHIP IMD10A	0	0	0	R076	AQ00484R	RES.-CHIP 1/16W 100K-J (2 UNIT	0	0	0
Q012	CA00461R	TRS.CHIP 2SD2114K 20V TAPE	0	0	0	R082	AQ00457R	RES.-CHIP 1/16W 1.0K-J (2 UNIT)	0	0	0
Q013	CA14091R	PHOTO TRANSISTOR	0	0	0	R083	AQ00457R	RES.-CHIP 1/16W 1.0K-J (2 UNIT)	0	0	0
Q014	CA00461R	TRS.CHIP 2SD2114K 20V TAPE	0	0	0	R088	AQ00544R	CHIP RESISTOR 3.3KOHM	0	0	0
Q015	CA02162R	SUT487J	0	0	0	R096	0790015R	RES.CHIP 1/16W 22 OHM	0	0	0
Q016	1323294R	TRS.CHIP 2SA1774 TL (R/S)	0	0	0	R099	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
QH01	1323293R	TRS.CHIP 2SC4617 TL (R/S)	0	0	0	R0A0	0790015R	RES.CHIP 1/16W 22 OHM	0	0	0
QH02	1323293R	TRS.CHIP 2SC4617 TL (R/S)	0	0	0	R0A1	0790015R	RES.CHIP 1/16W 22 OHM	0	0	0
QH04	1323293R	TRS.CHIP 2SC4617 TL (R/S)	0	0	0	R0A2	0790015R	RES.CHIP 1/16W 22 OHM	0	0	0
QL01	CA02091R	SRC1204EF_PF	0	0	0	R0A3	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
QM01	CA02091R	SRC1204EF_PF		0	0	R0A4	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
QM02	CA02142R	TRS.CHIP 2SC5343UFG_PF		0	0	R0A5	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
QM03	CA02091R	SRC1204EF_PF		0	0	R0A6	0790015R	RES.CHIP 1/16W 22 OHM	0	0	0
QM04	1323294R	TRS.CHIP 2SA1774 TL (R/S)		0	0	R0A7	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
QP04	1323294R	TRS.CHIP 2SA1774 TL (R/S)		0	0	R0C3	AQ00448R	CHIP RESISTOR 220 1608	0	0	0
QP05	CA14091R	PHOTO TRANSISTOR		0	0	R0C4	AQ00483R	CHIP RESISTOR 82K 1608	0	0	0
QP06	CA02091R	SRC1204EF_PF		0	0	R0C9	AQ00457R	RES.-CHIP 1/16W 1.0K-J (2 UNIT)	0	0	0
QPS1	CA14091R	PHOTO TRANSISTOR	0	0	0	R0E1	AQ00471R	RES.-CHIP 1/16W 10K-J (2 UNIT)	0	0	0
QT01	CA14091R	PHOTO TRANSISTOR	0	0	0	R0E2	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0
QT02	CA14091R	PHOTO TRANSISTOR	0	0	0	R0G4	AQ00266R	RES.CHIP 1/16W 510K OHM TAPE	0	0	0
QT03	CA02171R	TRS.CHIP 2SC4082T106P	0	0	0	R0G5	AQ00245R	RES.CHIP 1/16W 82K OHM TAPE	0	0	0
QT04	CA02171R	TRS.CHIP 2SC4082T106P	0	0	0	R0G7	0790059R	RES.CHIP 1/16W 47K OHM	0	0	0
QT05	CA02171R	TRS.CHIP 2SC4082T106P	0	0	0	R0G8	0790059R	RES.CHIP 1/16W 47K OHM	0	0	0
QT06	CA14091R	PHOTO TRANSISTOR	0	0	0	R0G9	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
QT07	CA14091R	PHOTO TRANSISTOR	0	0	0	R0H0	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0
QY01	CA11641R	PHOTO TRANSISTOR		0	0	R0H1	0790064R	RES.CHIP 1/16W 100K OHM	0	0	0
QY02	CA11641R	PHOTO TRANSISTOR		0	0	R0H2	0790064R	RES.CHIP 1/16W 100K OHM	0	0	0
QY03	1323294R	TRS.CHIP 2SA1774 TL (R/S)		0	0	R0H3	0790064R	RES.CHIP 1/16W 100K OHM	0	0	0
						R0H4	0790064R	RES.CHIP 1/16W 100K OHM	0	0	0
		RESISTORS				R0H5	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0
R001	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	0	R0H6	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
R002	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	0	R0H7	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0
R003	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	0	R0H8	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
R004	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	0	R0H9	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
R005	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	0	R0J2	0790073R	RES.CHIP 1/16W 470K OHM	0	0	0
R006	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	R0K0	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
R007	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	R0K1	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	0
R008	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	R0K2	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	0
R009	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	R0K3	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	0
R011	AQ00457R	RES.-CHIP 1/16W 1.0K-J (2 UNIT)	0	0	0	R0K4	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
R012	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	R0K5	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
R013	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	R0K6	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
R014	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	R0K7	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
R019	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	RH01	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
R020	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	0	RH02	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
R024	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0	RH03	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
R025	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0	RH04	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
R026	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	RH05	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
R027	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	RH06	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0

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SYMBOL	PART #	DESCRIPTION	55HDS69	55HDT79	55HDX99	SYMBOL	PART #	DESCRIPTION	55HDS69	55HDT79	55HDX99
RH07	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RM23	0790051R	RES.CHIP 1/16W 10K OHM		0	0
RH08	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RM24	0790051R	RES.CHIP 1/16W 10K OHM		0	0
RH09	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RM25	0790051R	RES.CHIP 1/16W 10K OHM		0	0
RH10	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RM27	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RH11	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RM28	0790051R	RES.CHIP 1/16W 10K OHM		0	0
RH12	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RM29	0790077R	RES.CHIP 1/16W 1.0M OHM		0	0
RH13	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RM30	0790044R	RES.CHIP 1/16W 3.3K OHM		0	0
RH14	0790064R	RES.CHIP 1/16W 100K OHM	0	0	0	RM31	0790037R	RES.CHIP 1/16W 1.0K OHM		0	0
RH15	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RM32	0790051R	RES.CHIP 1/16W 10K OHM	0		
RH17	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0	RP03	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RH18	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	RP06	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0
RH19	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0	RP07	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0
RH20	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0	RP12	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
RH22	0790059R	RES.CHIP 1/16W 47K OHM	0	0	0	RP18	0790073R	RES.CHIP 1/16W 470K OHM	0	0	0
RH23	0790059R	RES.CHIP 1/16W 47K OHM	0	0	0	RP19	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RH24	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0	0	RP29	0196116R	RES.-1608CHIP 1/16W 91K-J TAPE	0	0	0
RH25	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0	0	RP30	0790055R	RES.CHIP 1/16W 22K OHM	0	0	0
RH26	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RP45	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608		0	0
RH28	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RP46	0790024R	RES.CHIP 1/16W 100 OHM		0	0
RH29	AQ00212R	RES.CHIP 1/16W 4.7K OHM TAPE	0	0	0	RP47	0790024R	RES.CHIP 1/16W 100 OHM		0	0
RH30	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RP49	AQ01954R	RES.CHIP RK73B3ATTE 5R6J		0	0
RH31	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RP50	0790051R	RES.CHIP 1/16W 10K OHM		0	0
RH32	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RP51	AQ01938R	RES.CHIP RK73B3ATTE 1R5J		0	0
RH33	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RP52	0790037R	RES.CHIP 1/16W 1.0K OHM		0	0
RH34	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RP53	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0		
RH35	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RP53	0790077R	RES.CHIP 1/16W 1.0M OHM		0	0
RH36	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RP55	0790024R	RES.CHIP 1/16W 100 OHM		0	0
RH37	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RP56	0790051R	RES.CHIP 1/16W 10K OHM		0	0
RH38	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	RP57	0790051R	RES.CHIP 1/16W 10K OHM		0	0
RH39	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	RP58	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0		
RH40	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	RP60	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608		0	0
RH41	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	RP61	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608		0	0
RH43	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0	RP62	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608		0	0
RH44	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0	RP63	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608		0	0
RL01	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0	0	RP64	0790051R	RES.CHIP 1/16W 10K OHM	0		
RL02	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RP65	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608		0	0
RL03	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RPG1	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RL04	AQ00471R	RES.-CHIP 1/16W 10K-J (2 UNIT)	0	0	0	RPG2	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RL05	AQ00421R	CHIP RESISTOR 1608(2)0OHM	0	0	0	RPG3	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RL11	AQ00439R	CHIP RESISTOR 47 1608	0	0	0	RPG4	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RL12	AQ00439R	CHIP RESISTOR 47 1608	0	0	0	RPS1	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
RL21	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	RPS2	0790059R	RES.CHIP 1/16W 47K OHM	0	0	0
RL22	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	RPS3	0790055R	RES.CHIP 1/16W 22K OHM	0	0	0
RL23	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	RPT1	AQ00194R	RES.CHIP 1/16W 1.0K OHM TAPE	0	0	0
RL24	AQ00439R	CHIP RESISTOR 47 1608	0	0	0	RPT2	AQ00221R	RES.CHIP 1/16W 10K OHM TAPE	0	0	0
RL25	AQ00439R	CHIP RESISTOR 47 1608	0	0	0	RPT3	AQ00212R	RES.CHIP 1/16W 4.7K OHM TAPE	0	0	0
RL26	AQ00421R	CHIP RESISTOR 1608(2)0OHM	0	0	0	RPT4	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RL27	AQ00551R	CHIP RESISTOR 10KOHM	0	0	0	RPT6	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RL28	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0	RPT7	AQ00178R	RES.CHIP 1/16W 270 OHM TAPE	0	0	0
RL41	AQ00551R	CHIP RESISTOR 10KOHM	0	0	0	RT01	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RL43	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RT02	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RL44	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RT03	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RL51	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	RT04	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RL52	AQ00551R	CHIP RESISTOR 10KOHM	0	0	0	RT05	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RM01	0790024R	RES.CHIP 1/16W 100 OHM		0	0	RT08	0790032R	RES.CHIP 1/16W 390 OHM	0	0	0
RM02	0790024R	RES.CHIP 1/16W 100 OHM		0	0	RT11	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RM03	0790024R	RES.CHIP 1/16W 100 OHM		0	0	RT12	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0
RM05	0790051R	RES.CHIP 1/16W 10K OHM		0	0	RT13	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0
RM06	0790037R	RES.CHIP 1/16W 1.0K OHM			0	RT14	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0
RM07	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608		0	0	RT15	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0
RM08	0790024R	RES.CHIP 1/16W 100 OHM		0	0	RT16	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RM09	0790024R	RES.CHIP 1/16W 100 OHM		0	0	RT17	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RM10	0790047R	RES.CHIP 1/16W 5.6K OHM		0	0	RT18	0790006R	RES.CHIP 1/16W 4.7 OHM	0	0	0
RM11	0790051R	RES.CHIP 1/16W 10K OHM		0	0	RT19	0790006R	RES.CHIP 1/16W 4.7 OHM	0	0	0
RM12	0790037R	RES.CHIP 1/16W 1.0K OHM		0	0	RT22	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RM13	0790077R	RES.CHIP 1/16W 1.0M OHM		0	0	RT23	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RM14	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608		0	0	RT24	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RM15	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608		0	0	RT25	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0
RM16	0790047R	RES.CHIP 1/16W 5.6K OHM		0	0	RT31	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RM17	0790019R	RES.CHIP 1/16W 47 OHM		0	0	RT32	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RM18	0790047R	RES.CHIP 1/16W 5.6K OHM		0	0	RT33	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0
RM19	0790061R	RES.CHIP 1/16W 56K OHM		0	0	RT34	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RM20	0790062R	RES.CHIP 1/16W 68K OHM		0	0	RT35	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RM21	0790041R	RES.CHIP 1/16W 1.8K OHM		0	0	RT36	AQ00431R	CHIP RESISTOR 10 OHM 1608	0	0	0
RM22	0790051R	RES.CHIP 1/16W 10K OHM		0	0	RT37	0196881R	RES 2125CHIP 1/10W 510-F TAPE	0	0	0

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SYMBOL	PART #	DESCRIPTION	55HDS69	55HDT79	55HDX99	SYMBOL	PART #	DESCRIPTION	55HDS69	55HDT79	55HDX99
RT38	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RY34	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RT39	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RY35	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RT40	0790052R	RES.CHIP 1/16W 12K OHM	0	0	0	RY36	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RT41	0790052R	RES.CHIP 1/16W 12K OHM	0	0	0	RY37	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RT43	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	RY38	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RT44	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	0	RY39	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RT45	0790043R	RES.CHIP 1/16W 2.7K OHM	0	0	0	RY40	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RT46	AQ00258R	RES.CHIP 1/16W 270K OHM TAPE	0	0	0	RY41	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RT47	AQ00247R	RES.CHIP 1/16W 100K OHM TAPE	0	0	0	RY42	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RT48	AQ00229R	RES.CHIP 1/16W 22K OHM TAPE	0	0	0	RY43	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RT50	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0	0	RY44	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RT51	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0	RY45	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0
RT52	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0	0	RY46	0790056R	RES.CHIP 1/16W 27K OHM		0	0
RT53	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0						
RT55	0790052R	RES.CHIP 1/16W 12K OHM	0	0	0			**CRYSTALS, FILTERS**			
RT56	AQ00212R	RES.CHIP 1/16W 4.7K OHM TAPE	0	0	0	XM01	BL01182R	CSTCE16M0V53-R0		0	0
RT57	AQ00244R	RES.CHIP 1/16W 75K OHM TAPE	0	0	0	XM02	BP01231	OSX-OSBLA455KEC8-B0		0	0
RT58	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0	0	XPT1	BK10324R	CERAMIC FILTER NFM2012P13C105BT1	0	0	0
RT59	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0	0	XT01	BG01624U	SAW FILTER(X6875D)	0	0	0
RT60	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	XT02	BN00261	BGS TRAP MKTGA47M2CAHP00B05	0	0	0
RT61	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	XT03	BG01625U	SAW FILTER(X6888D)	0	0	0
RT62	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	XT04	BL01491R	OSC25R14X10T	0	0	0
RT63	0790011R	RES.CHIP 1/16W 10 OHM	0	0	0	XT06	BK00199R	CERAMIC FILTER 2012TYPE	0	0	0
RT64	0790011R	RES.CHIP 1/16W 10 OHM	0	0	0	XT07	BK00199R	CERAMIC FILTER 2012TYPE	0	0	0
RT65	0790011R	RES.CHIP 1/16W 10 OHM	0	0	0	XT08	BK10324R	CERAMIC FILTER NFM2012P13C105BT1	0	0	0
RT66	AQ00511R	CHIP RESISTOR 10OHM	0	0	0	XT09	BK10324R	CERAMIC FILTER NFM2012P13C105BT1	0	0	0
RT67	AQ00511R	CHIP RESISTOR 10OHM	0	0	0	XT10	BK10324R	CERAMIC FILTER NFM2012P13C105BT1	0	0	0
RT74	0790043R	RES.CHIP 1/16W 2.7K OHM	0	0	0	XT11	BK10324R	CERAMIC FILTER NFM2012P13C105BT1	0	0	0
RT75	0790043R	RES.CHIP 1/16W 2.7K OHM	0	0	0						
RT76	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0			**CONNECTORS, JACKS**			
RT77	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0	JH01	EA02291U	HDMI RECEPTACLE DC1R019HBA	0	0	0
RT78	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0	JY01	EQ00722	JACK YKC51-0002V 10P(2*5)	0	0	0
RT79	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0	JY02	EQ00733	JACK YKC52-0002V(3S+10P)	0	0	0
RT80	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	JY03	EQ00741	JACK		0	0
RT81	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	JY04	EQ00741	JACK		0	0
RT82	0790032R	RES.CHIP 1/16W 390 OHM	0	0	0	JY05	EQ00771	JACK	0	0	0
RT83	0790052R	RES.CHIP 1/16W 12K OHM	0	0	0	PFA1	EA02192R	3P SMT ZH CONN. POST SIDE	0	0	0
RT84	0790064R	RES.CHIP 1/16W 100K OHM	0	0	0	PFA2	EA02192R	3P SMT ZH CONN. POST SIDE	0	0	0
RT85	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	0	PH01	EA02651R	PLUG	0	0	0
RT86	0790028R	RES.CHIP 1/16W 220 OHM	0	0	0	PH02	EA02341R	2P 1.0MM PITCH CONNE. -501568-	0	0	0
RT87	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0	PSM	EA02222U	0.5 PITCH 200P B TO B CONN. SH	0	0	0
RT88	0790041R	RES.CHIP 1/16W 1.8K OHM	0	0	0	PTF	EA02203R	13P SMT ZH CONN. POST SIDE	0	0	0
RT89	0790042R	RES.CHIP 1/16W 2.2K OHM	0	0	0	PTW	ED01075	PLUG	0	0	0
RT90	0790042R	RES.CHIP 1/16W 2.2K OHM	0	0	0						
RT98	0790055R	RES.CHIP 1/16W 22K OHM	0	0	0			**MISCELLANEOUS**			
RY01	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608		0	0	UT01	HC00701	ENGD6305	0	0	0
RY02	0790059R	RES.CHIP 1/16W 47K OHM		0	0	#TG1	MF02032	GASKET 5-2-15 J1G	0	0	0
RY03	0790064R	RES.CHIP 1/16W 100K OHM		0	0	#TG2	MF02033	GASKET 5-2-45 J1G	0	0	0
RY04	0790012R	RES.CHIP 1/16W 12 OHM		0	0						
RY05	0790012R	RES.CHIP 1/16W 12 OHM		0	0			**FILTER PWB**			
RY06	0790012R	RES.CHIP 1/16W 12 OHM		0	0		JP50332		0	0	0
RY07	0790012R	RES.CHIP 1/16W 12 OHM		0	0						
RY09	0790024R	RES.CHIP 1/16W 100 OHM		0	0			**CAPACITORS**			
RY10	0790031R	RES.CHIP 1/16W 330 OHM		0	0	C9A1B ⚠	AN02089S	PLASTIC FILM CAP.CQ-105K251PVS	0	0	0
RY11	AQ00523R	CHIP RESISTOR 82OHM		0	0	C9A2B ⚠	AN02089S	PLASTIC FILM CAP.CQ-105K251PVS	0	0	0
RY12	AQ00528R	CHIP RESISTOR 220OHM		0	0	C9A3 ⚠	AJ00163R	CAP. CERAMIC CS11-E2GA222MYVS	0	0	0
RY13	0790031R	RES.CHIP 1/16W 330 OHM		0	0	C9A4 ⚠	AJ00163R	CAP. CERAMIC CS11-E2GA222MYVS	0	0	0
RY14	AQ00523R	CHIP RESISTOR 82OHM		0	0	CNJ1	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	0	0	0
RY15	AQ00528R	CHIP RESISTOR 220OHM		0	0	CNJ2	0800317R	CAP.-ELECTRO. 47UF-M(SMG) 16V	0	0	0
RY16	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608		0	0	CNJ3	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	0	0	0
RY17	0790028R	RES.CHIP 1/16W 220 OHM		0	0	CNJ4	0800291R	CAP.-ELECTRO. 10UF-M(SMG) 16V	0	0	0
RY18	0790028R	RES.CHIP 1/16W 220 OHM		0	0						
RY19	0790028R	RES.CHIP 1/16W 220 OHM		0	0			**JUMPERS**			
RY20	0790028R	RES.CHIP 1/16W 220 OHM		0	0	K9A1	2784381M	0.60MM TAPED JUMP.WIRE	0	0	0
RY21	AQ00163R	RES.CHIP 1/16W 68 OHM TAPE	0	0	0	K9A2	2784381M	0.60MM TAPED JUMP.WIRE	0	0	0
RY22	AQ00163R	RES.CHIP 1/16W 68 OHM TAPE	0	0	0	K9A3	2784381M	0.60MM TAPED JUMP.WIRE	0	0	0
RY23	AQ00163R	RES.CHIP 1/16W 68 OHM TAPE	0	0	0	K9A4	2784381M	0.60MM TAPED JUMP.WIRE	0	0	0
RY24	0790064R	RES.CHIP 1/16W 100K OHM	0	0	0	K9A5	2784381M	0.60MM TAPED JUMP.WIRE	0	0	0
RY25	0790064R	RES.CHIP 1/16W 100K OHM	0	0	0	K9A6	2784381M	0.60MM TAPED JUMP.WIRE	0	0	0
RY26	0790064R	RES.CHIP 1/16W 100K OHM	0	0	0	K9A7	2784381M	0.60MM TAPED JUMP.WIRE	0	0	0
RY27	0790064R	RES.CHIP 1/16W 100K OHM	0	0	0	KL9A2	2784381M	0.60MM TAPED JUMP.WIRE	0	0	0
RY28	0790064R	RES.CHIP 1/16W 100K OHM	0	0	0	KL9A3	2784381M	0.60MM TAPED JUMP.WIRE	0	0	0
RY29	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	KNJ1	2784381M	0.60MM TAPED JUMP.WIRE	0	0	0
RY31	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	KNJ2	2784381M	0.60MM TAPED JUMP.WIRE	0	0	0
RY33	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0						

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SYMBOL	PART #	DESCRIPTION	55HDS69	55HDT79	55HDX99
		PROTECTORS, FUSES			
F9A1 ⚠	FN00478	FUSE 51MS 100 L-U 125V 10A	0	0	0
NF9A1 ⚠	2721351	FUSE HOLDER	0	0	0
		COILS			
L9A1A ⚠	BZ06241	LINE FILTER TF3022H-A172Y10R0-	0	0	0
LNJ1	BH00693R	COIL 47UH	0	0	0
		TRANSISTORS			
QNJ1	CF02981R	2SC5343YT_PF	0	0	0
QNJ2	CF02981R	2SC5343YT_PF	0	0	0
		RESISTORS			
R9A1 ⚠	AT03661M	RES.MTL GRAZD FLM 1/2W 470K	0	0	0
RNC1	0700054M	RES.-CARBON FLM 1/16W 10K-JB	0	0	0
RNC2	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	0	0	0
RNC3	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	0	0	0
RNC4	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	0	0	0
RNC5	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	0	0	0
RNJ1	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	0	0	0
RNJ2	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	0	0	0
RNJ3	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	0	0	0
RNJ4	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	0	0	0
RNJ6	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	0	0	0
RNJ7	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	0	0	0
RNJ9	0700064M	RES.-CARBON FLM 1/16W 56K-JB	0	0	0
RNK1	0700064M	RES.-CARBON FLM 1/16W 56K-JB	0	0	0
RNK2	0100123M	RES.-CARBON FLM 1/8W 270K-JB	0	0	0
RNK3	0100123M	RES.-CARBON FLM 1/8W 270K-JB	0	0	0
		SWITCHES			
S9A0 ⚠	FG00251	POWER SW SPW02N02SY17-2-1(U1D1	0	0	0
SNC1	FE00551R	TACT SWITCH SKHVBDD010	0	0	0
SNC2	FE00551R	TACT SWITCH SKHVBDD010	0	0	0
SNC3	FE00551R	TACT SWITCH SKHVBDD010	0	0	0
SNC4	FE00551R	TACT SWITCH SKHVBDD010	0	0	0
SNC5	FE00551R	TACT SWITCH SKHVBDD010	0	0	0
SNC6	FE00551R	TACT SWITCH SKHVBDD010	0	0	0
SNC7	FE00551R	TACT SWITCH SKHVBDD010	0	0	0
		CONNECTORS, JACKS			
EP01	EF22542	FASTON CONNECTOR L=110MM LOCK	0	0	0
J9A1 ⚠	2676371	PLUG-AC INLET SK-1019	0	0	0
JNJ1	EQ00872	PLUG LPR8029-04**F	0	0	0
JNJ2	EQ00871	PLUG LPR8029-05**F	0	0	0
PCM2	2675284	PIN POST (PH 5P)	0	0	0
PFS	2959063	CONNECTOR POST PIN 13P	0	0	0
PPU1	ED02812	6P VH CONNECTOR PLUG #2,4,5 NC	0	0	0
		MISCELLANEOUS			
#01	NA56414	AC INLET MTL AVC5	0	0	0
#02	MJ03651	SCRW T3E_3*12BD+SM SWCH16A	0	0	0
#03	NA82611	DW2 INLET MTL	0	0	0
#04	MJ04025	SCRW M3S_3*12PN+LSK	0	0	0
#05	MD09981	DW2 INLET WASHER	0	0	0
#06	ML02721	MINI CARD SPACER 06	0	0	0
#07	MK01502	LKW_4.3_8.5	0	0	0
		POD PWB			
	JP50341		0		
	JP50342			0	0
		CAPACITORS			
CN30	AA01123R	CCC105K10-B-16CT	0	0	0
CN31	AA01123R	CCC105K10-B-16CT		0	0
CN32	AA01123R	CCC105K10-B-16CT	0	0	0
CN33	AA01123R	CCC105K10-B-16CT		0	0
CNM1	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CW01	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CW02	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CW03	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CW04	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CW05	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0
CW06	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0
CW07	AA00969R	CAP.CHIP2125-B-22UF6.3V	0	0	0
CW08	AA01116R	CAP.CHIP1608-B-10UF 6.3V M	0	0	0
CW09	0893193R	CAP 1608CHIP 10000PFKB 25V TAPE	0	0	0
CW10	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	0	0	0
CW11	AA01115R	CAP.CHIP1608-B-4.7UF6.3V	0	0	0
CW12	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CW13	0893193R	CAP 1608CHIP 10000PFKB 25V TAPE	0	0	0
CW14	AA01115R	CAP.CHIP1608-B-4.7UF6.3V	0	0	0
CW15	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CW16	AA01115R	CAP.CHIP1608-B-4.7UF6.3V	0	0	0
CW17	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CW18	0893193R	CAP 1608CHIP 10000PFKB 25V TAPE	0	0	0
CW19	AA01115R	CAP.CHIP1608-B-4.7UF6.3V	0	0	0
CW20	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CW21	AA01115R	CAP.CHIP1608-B-4.7UF6.3V	0	0	0
CW22	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CW23	0893193R	CAP 1608CHIP 10000PFKB 25V TAPE	0	0	0
CW24	AA01115R	CAP.CHIP1608-B-4.7UF6.3V	0	0	0
CW25	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CW26	0893193R	CAP 1608CHIP 10000PFKB 25V TAPE	0	0	0
CW27	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	0	0	0
CW28	AA01113R	CCC225K06-B-16CT	0	0	0
CW29	0893193R	CAP 1608CHIP 10000PFKB 25V TAPE	0	0	0
CWE1	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CWE2	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CWE4	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	0	0	0
CWE5	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE	0	0	0
CWE6	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE	0	0	0
CWP1	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0
CWP2	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	0
CWP3	AA00969R	CAP.CHIP2125-B-22UF6.3V	0	0	0
CWP4	AA00969R	CAP.CHIP2125-B-22UF6.3V	0	0	0
CWP5	0893118R	CAP 1608CHIP 27PFJCH 50V TAPE	0	0	0
CWP6	0893128R	CAP 1608CHIP 150PFJCH 50V TAPE	0	0	0
CWP7	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0
CWP8	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	0
CWP9	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE	0	0	0
		DIODES			
DN01	CC02061R	LIGHT EMITTING DIODE SML-020ML	0	0	0
DN02	CC01862R	SML011BBTT86	0	0	0
DW01	CC00651R	SML-210MT T86 GREEN	0	0	0
DW02	CC00652R	SML-210DT	0	0	0
		MODULES			
HN01	CE00121R	SBX3050-02	0	0	0
HN02	CZ01261R	IRDA MODULE IC (RPM871-H12)		0	0
HNM1	CZ01241	GP1FM514TZ0F	0	0	0
		INTEGRATED CIRCUITS (IC's)			
IN01	CK38324R	DIGITAL MONOLITHIC IC (SN74LVC	0	0	0
IN02	CK38325R	DIGITAL MONOLITHIC IC (SN74LVC		0	0
IW01	CK53731U	XC3S50-5PQG208C	0	0	0
IW02	CK38378R	DIGITAL MONO IC SI-3012KM	0	0	0
IW03	CK51732R	MM1701CHBE	0	0	0
IW04	CK37212R	MONO IC TK11125CSCL	0	0	0
IWE1	CK53741R	TC7MBL3245AFK	0	0	0
IWE2	CK52581R	ANALOG MONOLITHIC IC(MAX4790E	0	0	0
IWP1	CK50071R	TPS62040DGQR	0	0	0
IWP2	CK37216R	MONO IC TK11133CSCL	0	0	0
		COILS			
LN30	BA00892R	LBC2518 CHIP COIL 47UH	0	0	0
LN31	BA00892R	LBC2518 CHIP COIL 47UH		0	0
LWP1	BA02252R	7E06NG TYPE POWER INDUCTOR 6.8	0	0	0
		TRANSISTORS			
QW01	CA02171R	TRS.CHIP 2SC4082T106P	0	0	0
QWE1	CA02091R	SRC1204EF_PF	0	0	0
		RESISTORS			
RN01	0790035R	RES.CHIP 1/16W 680 OHM	0	0	0
RN02	0790039R	RES.CHIP 1/16W 1.5K OHM	0	0	0
RN03	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0		
RN04	0790039R	RES.CHIP 1/16W 1.5K OHM	0	0	0
RN15	0790035R	RES.CHIP 1/16W 680 OHM	0	0	0
RN31	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0

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SYMBOL	PART #	DESCRIPTION	55HDS69	55HDT79	55HDX99	SYMBOL	PART #	DESCRIPTION	55HDS69	55HDT79	55HDX99
RN33	0790024R	RES.CHIP 1/16W 100 OHM		0	0	RW92	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0
RN34	0790024R	RES.CHIP 1/16W 100 OHM		0	0	RW93	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0
RNM1	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0	RW94	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0
RW01	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	RW95	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0
RW02	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	RW96	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0
RW03	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	RWE4	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0
RW04	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	RWE5	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0
RW05	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	RWE6	AQ00519R	CHIP RESISTOR 47OHM	0	0	0
RW06	AQ00519R	CHIP RESISTOR 47OHM	0	0	0	RWE7	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RW07	AQ00519R	CHIP RESISTOR 47OHM	0	0	0	RWE8	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0
RW08	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	RWE9	0790038R	RES.CHIP 1/16W 1.2K OHM	0	0	0
RW09	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	RWF1	0790061R	RES.CHIP 1/16W 56K OHM	0	0	0
RW10	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	RWF2	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0
RW11	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	RWF3	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0
RW12	0790017R	RES.CHIP 1/16W 33 OHM	0	0	0	RWF4	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0
RW13	AQ00519R	CHIP RESISTOR 47OHM	0	0	0	RWF5	AQ00519R	CHIP RESISTOR 47OHM	0	0	0
RW14	AQ00519R	CHIP RESISTOR 47OHM	0	0	0	RWF6	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0
RW15	AQ00519R	CHIP RESISTOR 47OHM	0	0	0	RWF7	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0
RW16	AQ00519R	CHIP RESISTOR 47OHM	0	0	0	RWF8	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0	0
RW17	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	RWP1	AQ00267R	RES.CHIP 1/16W 560K OHM TAPE	0	0	0
RW18	0790064R	RES.CHIP 1/16W 100K OHM	0	0	0	RWP2	AQ00247R	RES.CHIP 1/16W 100K OHM TAPE	0	0	0
RW19	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	RWP3	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0
RW20	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0	RWP4	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0
RW21	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0	0	RWP5	0790024R	RES.CHIP 1/16W 100 OHM	0	0	0
RW22	AQ00524R	CHIP RESISTOR 100OHM	0	0	0						
RW23	0790031R	RES.CHIP 1/16W 330 OHM	0	0	0			**CRYSTALS, FILTERS**			
RW25	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	XWP1	BK10324R	CERAMIC FILTER NFM2012P13C105BT1	0	0	0
RW26	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0						
RW28	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0			**CONNECTORS, JACKS**			
RW29	AQ00524R	CHIP RESISTOR 100OHM	0	0	0	JSW	EA02231R	8P 0.45 PITCH SOCKET 3234		0	0
RW30	AQ00546R	CHIP RESISTOR 4.7KOHM	0	0	0	JW01	EA03121U	PCMCIA HEADER	0	0	0
RW31	0790064R	RES.CHIP 1/16W 100K OHM	0	0	0	JWE1	EY01772R	SD MEMORY CARD 500998-0900	0	0	0
RW32	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	PCM1	EA02331R	11P 1.0MM PITCH CONNE. 501331-	0	0	0
RW33	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	PW01	EA03014R	80P 0.5MM PITCH FPC CONNECTOR	0	0	0
RW34	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	PWS	ED01055	CONNECTOR	0	0	0
RW35	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0						
RW36	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0			**MISCELLANEOUS**			
RW38	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	#01	NA75382	DW1 TERMINAL SUP MTL.	0	0	0
RW39	0790042R	RES.CHIP 1/16W 2.2K OHM	0	0	0	NW01~2	MJ03878	SCRW M3M_2*10PN+SM Unknown	0	0	0
RW40	0790042R	RES.CHIP 1/16W 2.2K OHM	0	0	0						
RW43	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0			**FINAL ASS'Y**			
RW44	AQ00519R	CHIP RESISTOR 47OHM	0	0	0						
RW45	AQ00519R	CHIP RESISTOR 47OHM	0	0	0			**SPEAKERS**			
RW46	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	SPBL	GM01692	SPEAKER UNIT	0	0	0
RW47	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	SPBR	GM01692	SPEAKER UNIT	0	0	0
RW48	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	SPL	GM01711	SPEAKER UNIT	0	0	0
RW49	AQ00519R	CHIP RESISTOR 47OHM	0	0	0	SPR	GM01712	SPEAKER UNIT	0	0	0
RW50	AQ00519R	CHIP RESISTOR 47OHM	0	0	0						
RW51	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0			**MISCELLANEOUS**			
RW52	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	A11	JP50321	DW2-U SUBDIGITAL PWB ASS'Y	0		
RW53	AQ00519R	CHIP RESISTOR 47OHM	0	0	0	A12	JP50322	DW2-U SUBDIGITAL PWB ASS'Y		0	
RW54	AQ00519R	CHIP RESISTOR 47OHM	0	0	0	A13	JP50323	DW2-U SUBDIGITAL PWB ASS'Y			0
RW55	AQ00519R	CHIP RESISTOR 47OHM	0	0	0	A21	JP50331	DW2-U FILTER PWB ASS'Y	0	0	0
RW56	AQ00519R	CHIP RESISTOR 47OHM	0	0	0	A31	JP50341	DW2-U POD PWB ASS'Y	0		
RW57	AQ00519R	CHIP RESISTOR 47OHM	0	0	0	A32	JP50342	DW2-U POD PWB ASS'Y		0	0
RW59	AQ00519R	CHIP RESISTOR 47OHM	0	0	0	A01	DD00752K	FPF55C17196UB-85	0	0	0
RW60	AQ00519R	CHIP RESISTOR 47OHM	0	0	0	A02	TS06311	55P2 LOGIC PWB	0	0	0
RW62	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	A03	TS06023	FPF28R-SCWM3 (LOGIC SCREWS)	0	0	0
RW63	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	A21	JP50761	PSA DW2-A MAIN-DIGITAL (S/T)	0		
RW64	0790064R	RES.CHIP 1/16W 100K OHM	0	0	0	A22	JP50762	PSA DW2-B MAIN-DIGITAL (X)			0
RW72	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0	A23	JP50763	PSA DW2-C MAIN-DIGITAL (T)		0	
RW73	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0	U1	HA01751	POWER UNIT	0	0	0
RW79	AQ00243R	RES.CHIP 1/16W 68K OHM TAPE	0	0	0	FAN	GS00702	3110KL-04W-B10	0	0	0
RW80	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0						
RW81	AQ00231R	RES.CHIP 1/16W 24K OHM TAPE	0	0	0			**CONNECTORS**			
RW82	AQ00247R	RES.CHIP 1/16W 100K OHM TAPE	0	0	0	E403	EK01932	WIRE (PROCESSED) JF04R0R021970	0	0	0
RW83	AQ00258R	RES.CHIP 1/16W 270K OHM TAPE	0	0	0	E55H	EF26021C	ASS'Y CONNE. (SMP/PH/PA/ZH/SH/	0	0	0
RW84	0790051R	RES.CHIP 1/16W 10K OHM	0	0	0	EA01	EK01901	80P FFC CABLE L=***MM UL20861	0	0	0
RW85	AZ01031R	THERMISTOR NANOSMDC050F13.2	0	0	0	ECN1	EF25782	41J LVDS CABLE L=400 (FI-R DF1	0	0	0
RW86	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	ECN23	EF25991	10P VH CONNE. L=340MM	0	0	0
RW87	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	ECN6	2908898S	11J PH CONNECTOR 200MM	0	0	0
RW88	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	0	EFAN	EF26001	3P ZH CONNE. L=25MM	0	0	0
RW89	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	EGND	EF24041	CO-01T-T0R0-101	0	0	0
RW90	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	EPM1	EF25972	8P EH-ZH CONNE. L=180MM	0	0	0
RW91	0790019R	RES.CHIP 1/16W 47 OHM	0	0	0	EPM2	EF25982	15P EH-DF3 CONNE. L=470MM	0	0	0

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SYMBOL	PART #	DESCRIPTION	55HDS69	55HDT79	55HDX99	SYMBOL	PART #	DESCRIPTION	55HDS69	55HDT79	55HDX99
EPU1	EF21567	6P VH CONNECTOR L=380MM #2,4,5	0	0	0						
ERF	EY02262	PLUG L NIC8014N	0	0	0						
EUSB	EW08563	4J USB CABLE L=1180MM EARTH		0	0						
		FERRITE CORES									
ECN1A	GX00666	CLAMP FERRITE CORE K5C RC 16X2	0	0	0						
EMC1A	GX00666	CLAMP FERRITE CORE K5C RC 16X2			0						
EPU1A	GX00666	CLAMP FERRITE CORE K5C RC 16X2	0	0	0						
EPU1B	GX00666	CLAMP FERRITE CORE K5C RC 16X2	0	0	0						
ES1	2169511	COIL LX-ZCAT1518	0	0	0						
ES2	2169511	COIL LX-ZCAT1518	0	0	0						
		ACCESSORIES									
E01	EV01841	POWER CORD 125V10A UL/CSA	0	0	0						
E01A	GX00666	CLAMP FERRITE CORE K5C RC 16X2	0	0	0						
E201	EY01641	PJX-IR BLASTER DP2X		0	0						
E202	EY01641	PJX-IR BLASTER DP2X		0	0						
E203	FQ00021	DRY BATTERY(R6P-AA)	0	0	0						
E204	FR00061	DRY BATTERY R03(AB) E T			0						
E301	2169513	COIL LX-ZCAT2032		0	0						
ESWVL	EW08432	8P PLUG CODE L=165 MM		0	0						
N01	QR66761	HDS69 INSTRUCTION BOOK	0								
N01	QR66771	HDT79 INSTRUCTION BOOK		0	0						
N02	QR66791	HDS69 EASY GUIDE	0								
N02	QR66801	HDT79 EASY GUIDE		0	0						
N202	QT47722	DIRECTOR'S WARRANTY CARD			0						
N203	QT44791	PLASMA WARRANTY CARD CANADA	0	0	0						
N204	QT47721	NATIONAL WARRANTY CARD	0	0							
U01	HL02069	REMOTE CONTROL UNIT CLU-3861WL		0	0						
U01	HL02073	REMOTE CONTROL UNIT-CLU-4352UG2	0								
U02	HL01864	RCT- CLU123S			0						

QUICK REFERENCE PARTS LIST
IC'S & UNITS

No.	Symbol	P#	Description	Function	PWB ASSY	Remarks
1	A21	JP50761	PSA DW2-A MAIN-DIGITAL (55HDS69)	MAIN DIGITAL ASS'Y	MAIN DIGITAL	
2	A22	JP50762	PSA DW2-B MAIN-DIGITAL (55HDX99)	MAIN DIGITAL ASS'Y	MAIN DIGITAL	
3	A23	JP50763	PSA DW2-C MAIN-DIGITAL (55HDT79)	MAIN DIGITAL ASS'Y	MAIN DIGITAL	
4	DN01	CC02061R	LIGHT EMITTING DIODE SML-020ML	RED/ORANGE LED	LED	
5	DN02	CC01862R	SML011BBTT86	BLUE LED	LED	
6	HN01	CE00121R	SBX3050-02	IR RECEIVER	LED	
7	HN02	CZ01261R	IRDA MODULE IC (RPM871-H12)	IR RECEIVER	LED	ONLY HDT/HDX MODELS
8	HNM1	CZ01241	GP1FM514TZ0F	IR RECEIVER	LED	
9	L9A1	BZ06251	LINE FILTER TF2722H-A152Y8R0-0	AC NOISE FILTER	FILTER	
10	F9A2	FN00475	FUSE 51MS 063 L-U 6.3A	FUSE	FILTER	
11	I001	CK53531U	R2S11008FP	AUDIO/VIDEO SELECTOR	SUBDIGITAL	
12	I004	CK51331R	TK11100CS	ADJUSTABLE POSITIVE LOW DROPOUT REGULATOR IC	SUBDIGITAL	
13	I005	CK37218R	MONO IC TK11150CSCL	5 V VOLTAGE REGULATOR W ON/OFF SW	SUBDIGITAL	
14	IH02	CK53891R	TMDS SW IC CXB1441R	CABLE EQUALIZER SW	FRONT HDMI	
15	IH03	CK37216R	MONO IC TK11133CSCL	3.3 V VOLTAGE REGULATOR W ON/OFF SW	FRONT HDMI	
16	IH04	CK38329R	DIGITAL MONOLITHIC IC (SN74LVC1G126DCK)	SINGLE BUS BUFFER GATE WITH 3-STATE OUTPUTS	FRONT HDMI	
17	IH05	CK38329R	DIGITAL MONOLITHIC IC (SN74LVC1G126DCK)	SINGLE BUS BUFFER GATE WITH 3-STATE OUTPUTS	FRONT HDMI	
18	IL01	CK50961R	SN74CB3T3306DCUR	DUAL FET BUS SWITCH	SUBDIGITAL	
19	IM01	CK51632R	9DR32DW8-1046	IR BLASTER	SUBDIGITAL	ONLY HDT/HDX MODELS
20	IM02	CK51091R	SN74LVC1G3157DCKR	SINGLE-POLE, DOUBLE-THROW ANALOG SW	SUBDIGITAL	ONLY HDT/HDX MODELS
21	IM03	CK38328R	IC SN74LVC1G125DCKR	SINGLE BUS BUFFER GATE WITH 3-STATE OUTPUTS	SUBDIGITAL	ONLY HDX MODELS
22	IM04	CK38328R	IC SN74LVC1G125DCKR	SINGLE BUS BUFFER GATE WITH 3-STATE OUTPUTS	SUBDIGITAL	ONLY HDT/HDX MODELS
23	IM05	2015203R	HD74HC00TELLE	QUAD 2-INPUT NAND GATES	SUBDIGITAL	ONLY HDT/HDX MODELS
24	IM06	CK54692R	GENERAL LOGIC IV(TC74AC163FT)	SYNCHRONOUS PRESETTABLE 4 BIT BINARY COUNTER	SUBDIGITAL	ONLY HDT/HDX MODELS
25	IM07	CK51091R	SN74LVC1G3157DCKR	SINGLE-POLE, DOUBLE-THROW ANALOG SW	SUBDIGITAL	ONLY HDT/HDX MODELS
26	IM08	CK37218R	MONO IC TK11150CSCL	5 V VOLTAGE REGULATOR W ON/OFF SW	SUBDIGITAL	
27	IP03	CK52481R	TK73400TCB-G	6.2 VOLTAGE REGULATOR FOR TV / VTR USE	SUBDIGITAL	
28	IP05	CK50461R	ANALOG MONOLITHIC IC(BA6287F)	REVERSIBLE MOTOR DRIVER	SUBDIGITAL	ONLY HDT/HDX MODELS
29	IPT1	CK54161R	ANALOG MONOLITHIC IC(MP2361DK	DC-DC CONVERTER	SUBDIGITAL	
30	IT02	CK54051U	THEATER314	QAM/VSB DEMODULATOR	SUBDIGITAL	
31	IT03	CK51091R	SN74LVC1G3157DCKR	SINGLE-POLE, DOUBLE-THROW ANALOG SW	SUBDIGITAL	
32	IT04	CK50961R	SN74CB3T3306DCUR	DUAL FET BUS SWITCH	SUBDIGITAL	
33	IT05	CK37218R	MONO IC TK11150CSCL	5 V VOLTAGE REGULATOR W ON/OFF SW	SUBDIGITAL	
34	IT06	CK37605R	IC TK11250CM	5 V VOLTAGE REGULATOR W ON/OFF SW	SUBDIGITAL	
35	IT07	CK37605R	IC TK11250CM	5 V VOLTAGE REGULATOR W ON/OFF SW	SUBDIGITAL	
36	IT09	CK51151R	UPC3221GV	5 V AGC AMPLIFIER	SUBDIGITAL	
37	IT10	CK51141R	UPC3220GR	CATV OUT-OF-BAND TUNER	SUBDIGITAL	
38	IT11	CK37211R	MONO IC TK11118CSCL	1.8 V VOLTAGE REGULATOR W ON/OFF SW	SUBDIGITAL	
39	IT12	CK37216R	MONO IC TK11133CSCL	3.3 V VOLTAGE REGULATOR W ON/OFF SW	SUBDIGITAL	
40	IY01	CK38325R	DIGITAL MONOLITHIC IC (SN74LVC1G17DCK)	SINGLE SCHMITT TRIGGER BUFFER	SUBDIGITAL	ONLY HDT/HDX MODELS
41	IY02	CK38325R	DIGITAL MONOLITHIC IC (SN74LVC1G17DCK)	SINGLE SCHMITT TRIGGER BUFFER	SUBDIGITAL	ONLY HDT/HDX MODELS
42	IY03	CK50027R	DIGITAL MONOLITHIC IC (MAX202IPW)	DUAL RS-232 LINE DRIVER/REC W/+-15KV ESD PROTEC	SUBDIGITAL	
43	IN01	CK38324R	DIGITAL MONOLITHIC IC (SN74LVC1G14DCK)	SINGLE SCHMITT-TRIGGER INVERTER	LED	
44	IN02	CK38325R	DIGITAL MONOLITHIC IC (SN74LVC1G17DCK)	SINGLE SCHMITT TRIGGER BUFFER	LED	ONLY HDT/HDX MODELS
45	IW01	CK53731U	XC3S50-5PQG208C	OBERON IC (POD IC)	POD	
46	IW02	CK38378R	DIGITAL MONO IC SI-3012KM	1 A, LOW DROPOUT, 1.28~15 V REGULATOR	POD	
47	IW03	CK51732R	MM1701CHBE	1.2 V VOLTAGE REGULATOR	POD	
48	IW04	CK37212R	MONO IC TK11125CSCL	2.5 V VOLTAGE REGULATOR W ON/OFF SW	POD	
49	IWE1	CK53741R	TC7MBL3245AFK	OCTAL BUS SWITCH	POD	
50	IWE2	CK52581R	ANALOG MONOLITHIC IC(MAX4790EUS)	CURRENT LIMIT SWITCH	POD	
51	IWP1	CK50071R	TPS62040DGQR	HIGH EFFICIENCY STEP DOWN CONVERTER	POD	
52	IWP2	CK37216R	MONO IC TK11133CSCL	3.3 V VOLTAGE REGULATOR W ON/OFF SW	POD	
53	JWE1	EY01772R	SD MEMORY CARD 500998-0900	MEMORY CARD JACK	POD	
54	U1	HA01751	POWER UNIT	POWER UNIT	POWER	
55	UT01	HC00701	ENGD6305	ANALOG/DIGITAL TUNER	SUBDIGITAL	

Part Numbers for Boards and Assemblies

PANEL BOARDS 42"							
Model	**Power Supply**	**X-SUS PWB**	**X-BUS PWB**	**Y-SUS PWB**	**Logic PWB**	**A-BUS-L PWB**	**A-BUS-R PWB**
42HDS69	HA01731	FPF33R-XSS0041	FPF33R-XBU0035	FPF33R-YSS0042	FPF33R-LGC0061	FPF33R-ABL0038	FPF33R-ABR0039
42HDT79							
42HDX99							

PANEL BOARDS 55"							
Model	**Power Supply**	**X-SUS PWB**	**X-BUS PWB**	**Y-SUS PWB**	**SDR-U PWB**	**SDR-D PWB**	**LOGIC PWB**
55HDS69	HA01751	FPF31R-XSS0031	FPF31R-XBU0029	FPF31R-YSS0032	FPF31R-SDR0033	FPF31R-SDR0034	FPF31R-LGC0053
55HDT79							
55HDX99							
A-BUS-D1 PWB	**A-BUS-D2 PWB**	**A-BUS-D3 PWB**	**A-BUS-D4 PWB**	**A-BUS-U1 PWB**	**A-BUS-U2 PWB**	**A-BUS-U3 PWB**	**A-BUS-U4 PWB**
FPF31RABD002811	FPF31RABD002812	FPF31RABD002813	FPF31RABD002814	FPF31RABU002801	FPF31RABU002802	FPF31RABU002803	FPF31RABU002804

CHASSIS BOARDS 42" & 55"										
Model	**Chassis[1]**	**Sub-Digital PWB[2]**	**AC Filter PWB**	**POD PWB[3]**	**Main-Digital PWB[4]**	**(Side) HDMI PWB**	**Control PWB**	**(Side) Terminal PWB**	**LED / IR PWB**	**OPT PWB**
42HDS69	UE26051	JP50321	JP50331	JP50341	JP50761	X480401	X480402	X480403	X480404	(Included with POD PWB)
42HDT79	UE26052	JP50322		JP50342	JP50763					
42HDX99	UE26053	JP50323			JP50762					
55HDS69	UE26054	JP50321	JP50332	JP50341	JP50761					
55HDT79	UE26055	JP50322		JP50342	JP50763					
55HDX99	UE26056	JP50323			JP50762					

NOTES:
1. **Chassis** includes everything EXCEPT the **Main-Digital PWB**.
2. **Sub-Digital PWB** includes the Main Terminal Block.
3. **POD** means **P**oint **O**f **D**eployment, which is another term for CableCard.
4. **Main-Digital PWB** is not included with **Chassis**.

CH 2

CH 3

HITACHI